

# **Exhibit 15**

1 UNITED STATES DISTRICT COURT  
2 NORTHERN DISTRICT OF CALIFORNIA

3 IN RE: ROUNDUP PRODUCTS MDL NO. 2741  
4 LIABILITY LITIGATION CASE NO. 16-MD-02741-VC

5 MONSANTO COMPANY'S NOTICE TO TAKE  
6 ORAL AND VIDEOTAPED DEPOSITION OF  
7 DR. MATTHEW ROSS

8 THIS DOCUMENT RELATES TO:

9 ALL ACTIONS

\*\*\*\*\*

10 VIDEOTAPED DEPOSITION OF  
11 DR. MATTHEW ROSS

\*\*\*\*\*

12 APPEARANCES NOTED HEREIN

13  
14 DATE: MAY 3, 2017

15 PLACE: MISSISSIPPI STATE UNIVERSITY  
16 ALLEN HALL, 175 PRESIDENT'S CIRCLE  
17 MISSISSIPPI STATE, MISSISSIPPI

18 TIME 9:33 A.M.

19 REPORTED BY: TODD J. DAVIS  
20 BCR, CSR #1406, RPR

21  
22  
23  
24  
25 JOB NO. 123225

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1 APPEARANCES:

2

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23 Also Present: Eddie Nabors, Videographer  
Dylan White, Esq. - MSU

24

25

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1 (Exhibit No. 13-1 marked for  
2 identification.)

3 (Exhibit No. 13-2 marked for  
4 identification.)

5 (Exhibit No. 13-3 marked for  
6 identification.)

7 VIDEOGRAPHER: This is the deposition of  
8 Dr. Matthew K. Ross. This is the start of  
9 tape of DVD label number one of the  
10 videotaped deposition of Dr. Matthew K. Ross  
11 in Re Roundup Product Litigation. It is in  
12 United States District Court for the Northern  
13 District of California, Civil Action  
14 16-MD-2741-VC.

15 The deposition is being held at Allen  
16 Hall, Mississippi State University, on May  
17 the 3rd of 2017, commencing at approximately  
18 9:33 a.m.

19 My name is Eddie Nabors. I am the legal  
20 video specialist from TSG Reporting,  
21 headquartered at 747 Third Avenue, New York,  
22 New York. The court reporter is Todd Davis,  
23 also in association with TSG reporting.

24 Ask for counsel introductions on the  
25 audio portion, please.

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1 MR. GRIFFIS: Kirby Griffis of  
 2 Hollingsworth representing Monsanto.  
 3 MS. SHIMADA: Elyse Shimada of  
 4 Hollingsworth representing Monsanto.  
 5 MR. TRAVERS: My name is Jeffrey Travers  
 6 with the Miller Firm representing plaintiffs.  
 7 MS. WAGSTAFF: Aimee Wagstaff from  
 8 Andrus Wagstaff in Denver, Colorado,  
 9 representing the plaintiffs.  
 10 MR. WHITE: Dylan White representing  
 11 Dr. Matthew Ross.  
 12 VIDEOGRAPHER: Will the reporter  
 13 administer the oath, please.  
 14  
 15  
 16  
 17  
 18  
 19  
 20  
 21  
 22  
 23  
 24  
 25

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1 MATTHEW K. ROSS, PH.D,  
 2 having been first duly sworn, was examined and  
 3 testified under oath as follows:  
 4 MS. WAGSTAFF: So before we start, I  
 5 would like to read something on to the  
 6 record.  
 7 MR. GRIFFIS: Sure.  
 8 MS. WAGSTAFF: If you may. Just as an  
 9 administrative matter, Mr. White and I are  
 10 splitting a microphone which is clipped to a  
 11 coaster between us, so we are proceeding  
 12 hopefully that everything will be picked up  
 13 by that microphone.  
 14 VIDEOGRAPHER: I am hearing you  
 15 perfectly fine.  
 16 MS. WAGSTAFF: Excellent. Excellent.  
 17 Secondly, Monsanto has requested that  
 18 Dr. Ross's deposition to "explore the  
 19 mechanism subgroups conclusion about  
 20 glyphosate." They have requested this  
 21 limited additional discovery, which the Court  
 22 has allowed.  
 23 On April 18th, 2017, the MDL Court  
 24 entered PTO 16, which said that, "Monsanto  
 25 may subpoena Dr. Ross for 'fact deposition.'"

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1 As such, plaintiffs will object to any  
 2 expert testimony elicited by Monsanto or  
 3 given to -- or given by Dr. Ross and will try  
 4 to object as the questions are requested but  
 5 present this general objection on the record  
 6 before we begin.  
 7 MR. GRIFFIS: Anything else?  
 8 MS. WAGSTAFF: Nothing else. You may  
 9 proceed.  
 10 MR. GRIFFIS: Yeah.  
 11 EXAMINATION BY MR. GRIFFIS:  
 12 Q. Yeah. I will address that.  
 13 Dr. Ross, have you been deposed  
 14 before?  
 15 A. No. This is the first time.  
 16 Q. Okay. I am going to start by asking you  
 17 to state your full name.  
 18 A. My name is Matthew K. Ross.  
 19 Q. And you are -- you have a Ph.D.?  
 20 A. I have a Ph.D.  
 21 Q. And in what, please?  
 22 A. It is in environmental toxicology,  
 23 molecular toxicology.  
 24 Q. I'm going to go on and ask some more  
 25 questions about your qualifications and do a

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1 little housekeeping stuff like mark the legal  
 2 documents that are going to be involved in this  
 3 deposition.  
 4 We are going to be doing a number  
 5 of things like marking documents, putting exhibit  
 6 stickers on them, and then handing them to you.  
 7 And the general format is that I'll be asking  
 8 questions, and you'll be answering the questions.  
 9 I'm going to assume, if I ask you a  
 10 question and you don't tell me that you haven't  
 11 understood it, that you do understand it. And at  
 12 times, your attorney may make an objection, or  
 13 Ms. Wagstaff may make an objection.  
 14 If your attorney instructs you not  
 15 to answer a question, then you're entitled to  
 16 listen to him and not answer that question.  
 17 Otherwise, it's your obligation to answer the  
 18 questions that I've asked whether there's an  
 19 objection or not.  
 20 Do you understand that, sir?  
 21 A. Yes.  
 22 Q. Okay.  
 23 MS. WAGSTAFF: I would object to the  
 24 fact that he doesn't know when he doesn't  
 25 understand you, but I understand your point.

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1 MR. GRIFFIS: Sure.  
 2 The videographer has asked me to put on  
 3 the record that his -- that although his  
 4 instructions were to create a split screen  
 5 video between me and you as a final  
 6 production copy -- as going forward I have  
 7 instructed him not to do that, but instead to  
 8 make two videos. And we will clarify in post  
 9 what we want done with those.  
 10 Presumably, we'll just take delivery of  
 11 two videos, but in any event, his  
 12 instructions were incorrect to that extent.  
 13 BY MR. GRIFFIS:  
 14 Q. I have marked as Exhibit 13-1 a subpoena  
 15 to testify at a deposition in a civil action.  
 16 It's called a notice of deposition. This was  
 17 issued by Monsanto for your deposition here today,  
 18 sir.  
 19 13-2 is a cross notice by the  
 20 plaintiffs for the same deposition.  
 21 And 13-3 is a subpoena to produce  
 22 documents, which I presume that you have seen  
 23 before, sir. And I'm putting that into evidence  
 24 because I will be asking some questions about it  
 25 later and because the notice of the deposition

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1 refers to it.  
 2 Have you seen any of those  
 3 documents before, sir?  
 4 A. Yes.  
 5 Q. All three?  
 6 A. I have not seen this. No.  
 7 Q. Haven't seen the cross notice. But you  
 8 have seen Monsanto's notice of deposition, and you  
 9 have seen the original subpoena for documents to  
 10 which you responded by producing some documents,  
 11 correct?  
 12 A. Yes.  
 13 Q. Okay. And have you brought any -- other  
 14 than your CV, which I'm about to mark as Exhibit 4  
 15 to this deposition, have you made any effort to  
 16 gather documents for this deposition you didn't  
 17 previously provide?  
 18 A. No.  
 19 Q. All right. Exhibit 13-4 is your CV.  
 20  
 21 (Exhibit 13-4 marked for  
 22 identification.)  
 23 BY MR. GRIFFIS:  
 24 Q. Okay. That is a current copy of your  
 25 CV, sir?

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1 A. Yes.  
 2 Q. Would you please tell the jury your  
 3 educational background?  
 4 MS. WAGSTAFF: Can I have a copy?  
 5 MR. WHITE: If you have another one, I'd  
 6 also like to see.  
 7 Thank you very much.  
 8 A. So I received a bachelor of science  
 9 degree in chemistry from UC Berkley in 1989. And  
 10 then I received a Ph.D. in molecular toxicology  
 11 from UC Irvine -- University of California at  
 12 Irvine -- in 1998.  
 13 Q. Do you do bench research primarily, sir?  
 14 A. Yes.  
 15 Q. Would tell the jury what bench research  
 16 is?  
 17 A. So the research I do is focused on  
 18 analytical chemistry, bioanalytical chemistry, the  
 19 study of how both environmental agents get  
 20 metabolized in the body. In addition to how  
 21 endogenous lipids get metabolized in the body.  
 22 Q. And what does bench mean in the terms of  
 23 bench research?  
 24 A. Yes. Sorry. So bench research refers  
 25 to work done in a laboratory under controlled

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1 conditions. So we don't necessarily work with  
 2 surveys or population surveys.  
 3 It is not epidemiological research.  
 4 It's basic science done in a laboratory at the  
 5 bench.  
 6 Q. And do you do work on experimental  
 7 animals?  
 8 A. Yes.  
 9 Q. How much of your work is on experimental  
 10 animals as opposed to in vitro?  
 11 A. I do mainly in vitro work. Mainly in  
 12 cultured cells. Human cells, animal cells, and  
 13 also in vivo studies in collaboration with other  
 14 scientists at Mississippi State.  
 15 Q. And would you please explain to the jury  
 16 in simple terms the difference between in vitro  
 17 and in vivo. We just used both of those terms.  
 18 A. Sure. In vivo studies are studies that  
 19 look at how a particular chemical may be  
 20 metabolized within the body, within the human  
 21 person, or in -- within an intact animal.  
 22 Those are studies that are  
 23 performed so that you're looking at the whole  
 24 system, the whole organism. In vitro studies are  
 25 done in which cultured cells are used to study

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1 various processes. It could be metabolism of a  
 2 chemical. So in vitro is done in isolated  
 3 cultured cells or what we call the subcellular  
 4 fraction in which we obtain various parts of a  
 5 tissue, but it is not the whole organism.  
 6 Q. And you mentioned both humans and  
 7 animals when you described in vivo studies.  
 8 Do you perform studies in humans?  
 9 A. We use human cells. We use -- we use a  
 10 cultured cell line that's derived from a -- from  
 11 humans. We use tissues from humans. Primary  
 12 cells that -- from actual human donors. So we use  
 13 those types of materials from humans, yes.  
 14 Q. So those are all in vitro studies,  
 15 though, not whole, intact human beings? They're  
 16 done in --  
 17 A. Correct.  
 18 Q. -- essentially in a Petri dish?  
 19 A. Yes. In test tubes, Petri dishes.  
 20 Q. "In vitro" means in glass?  
 21 A. That's the Latin word.  
 22 MS. WAGSTAFF: I'm going to object to  
 23 this, as it has nothing to do with the  
 24 mechanisms, subverts, conclusions about  
 25 glyphosate.

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1 BY MR. GRIFFIS:  
 2 Q. With regard to in vivo studies done,  
 3 have you done any in vivo studies in humans?  
 4 A. We -- let me see. As a bioanalytical  
 5 chemist, I have looked at urine samples to measure  
 6 pesticide metabolites.  
 7 Q. You have been involved as part of a team  
 8 that was doing epidemiology work?  
 9 A. Correct.  
 10 Q. And what study or studies was that in  
 11 connection with?  
 12 A. It was related to a study with  
 13 permethrin.  
 14 Q. And what was the research group who was  
 15 doing that study?  
 16 MS. WAGSTAFF: Same objection.  
 17 A. It was a research group here at  
 18 Mississippi State.  
 19 BY MR. GRIFFIS:  
 20 Q. Have you been involved with the  
 21 Agricultural Health Study?  
 22 A. I have been a member of their -- what do  
 23 you call it? What is the right word? Their board  
 24 that helps external advisory panel that -- that  
 25 listens to some of their presentations.

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1 Q. So you give scientific advice?  
 2 A. Correct.  
 3 Q. Have you performed any scientific work  
 4 in connection with any of those studies?  
 5 A. No.  
 6 Q. Okay.  
 7 MS. WAGSTAFF: Same objection.  
 8 BY MR. GRIFFIS:  
 9 Q. Again, talking about in vivo studies  
 10 only, sir, you told us that you don't do in vivo  
 11 studies in humans. You don't run those yourself,  
 12 at least, except to the extent that you may be  
 13 involved in analyzing urine samples for pesticide  
 14 residues, for example, as a part of someone else's  
 15 epidemiology study.  
 16 Do you run in vivo studies in any  
 17 species of intact animals?  
 18 A. In mice.  
 19 Q. Are you the primary researcher in those  
 20 studies?  
 21 A. In collaboration with my colleague at  
 22 Mississippi State.  
 23 Q. Okay. And you said that the majority of  
 24 your work is in vivo work; is that right -- I'm  
 25 sorry -- in vitro work?

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1 A. The majority of my work, I would say, is  
 2 done in vitro and in terms of bioanalytical  
 3 chemistry of samples obtained from an intact  
 4 animal like tissues or excreta from those animals.  
 5 Q. Have you done research on glyphosate?  
 6 A. No.  
 7 Q. That is true both before and after your  
 8 involvement with working group 112, correct?  
 9 A. Yes.  
 10 Q. Okay. Working group 112 is the IARC  
 11 group that looked into carcinogenicity of  
 12 glyphosate and four other pesticides, correct?  
 13 A. Yes.  
 14 Q. Okay. I'm going to have a number of  
 15 questions, obviously, today about your  
 16 participation in IARC and how that came to pass,  
 17 sir, and we'll turn to that in a moment.  
 18 First, I'd like to know, before you  
 19 went to working group 112, before you went to  
 20 Lyon, France, for that, did you know or had you  
 21 met Christopher Portier?  
 22 A. I have never met him before volume 112.  
 23 Q. Didn't know who he was before?  
 24 MS. WAGSTAFF: Objection. This has  
 25 nothing to do with the mechanisms, subgroups,

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1 conclusions about glyphosate. Chris Portier  
 2 is not even a monograph 112 member.  
 3 BY MR. GRIFFIS:  
 4 Q. Go ahead.  
 5 A. Did I know him? I knew -- I knew his  
 6 brother. I did not know Christopher Portier. I  
 7 had met his brother one other time.  
 8 Q. Okay. Before coming involved with  
 9 working group 112, did you know Kurt Straif?  
 10 A. No.  
 11 Q. Before becoming involved with working  
 12 group 112, did you know Phillip Landrican?  
 13 A. No.  
 14 Q. Did you know -- before becoming involved  
 15 with working group 112, did you know Lauren Zeise?  
 16 A. No.  
 17 Q. Before becoming involved with working  
 18 group 112, did you know Ivan Rusyn?  
 19 A. I knew of him. I knew of him, but I did  
 20 not know him personally.  
 21 Q. You never met him?  
 22 A. I had never met him.  
 23 Q. Do you know how it was -- how it came to  
 24 be that you were invited to participate in working  
 25 group 112?

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1 MS. WAGSTAFF: Objection. Calls for  
 2 speculation.  
 3 A. I -- I think I became involved because  
 4 of my experience in bioanalytical chemistry, in  
 5 the area of toxicokinetics and metabolism, and  
 6 extensive publications in organophosphate poisons.  
 7 BY MR. GRIFFIS:  
 8 Q. Do you know who whose -- who suggested  
 9 your name to participate in working group 112?  
 10 MS. WAGSTAFF: Calls for speculation.  
 11 MR. WHITE: You can answer to the extent  
 12 that you know.  
 13 A. I don't know.  
 14 BY MR. GRIFFIS:  
 15 Q. Were you ever told anything about why  
 16 you were invited by anyone?  
 17 A. I don't recall.  
 18 Q. How did you learn that you were being  
 19 invited to participate in working group 112?  
 20 A. I received an e-mail invitation from  
 21 IARC.  
 22 Q. And about how long before the actual  
 23 working group 112 convened in March of 2015 was  
 24 that?  
 25 A. If I recall, I had an e-mail invitation

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1 June 2014.  
 2 Q. And were there any rules imposed by the  
 3 university on your consultation? Was there  
 4 anything that you had to have cleared or approved  
 5 before you could do that?  
 6 MS. WAGSTAFF: Objection. This is  
 7 outside the scope of what Monsanto requested  
 8 and what the judge allowed.  
 9 MR. WHITE: Again, only answer to the  
 10 extent that you know.  
 11 A. The -- there was no stipulations. The  
 12 only -- I only needed to get approval for  
 13 international travel.  
 14 BY MR. GRIFFIS:  
 15 Q. Okay. So you got that approval, and  
 16 you -- as far as you knew, there weren't any other  
 17 requirements imposed by the university or  
 18 clearances that you needed to get to participate  
 19 in IARC working group 112?  
 20 MS. WAGSTAFF: Same objection.  
 21 A. There was -- no.  
 22 BY MR. GRIFFIS:  
 23 Q. All right.  
 24 (Exhibit No. 13-5 marked for  
 25 identification.)

Page 21

1 BY MR. GRIFFIS:  
 2 Q. Marked as Exhibit 5 an e-mail. And this  
 3 is an e-mail that you produced to us during  
 4 response to our deposition notice -- or our  
 5 request for production of documents which is  
 6 Exhibit 3.  
 7 This is from a Kathryn Forgie -- is  
 8 that pronounced correctly -- who is a lawyer at  
 9 Andrus Wagstaff, Ms. Wagstaff's firm, asking to  
 10 meet with you.  
 11 And did you respond to this e-mail?  
 12 A. I don't -- I don't recall.  
 13 Q. You don't recall receiving the e-mail?  
 14 A. I do remember receiving this e-mail. I  
 15 don't recall responding.  
 16 Q. Okay. Have you ever spoken to any  
 17 lawyers other than Mr. White about your work on  
 18 working group 112?  
 19 A. No.  
 20 MS. WAGSTAFF: Objection. Extremely  
 21 vague. Any lawyers anywhere? What if he has  
 22 friends that are lawyers.  
 23 MR. GRIFFIS: He has answered the  
 24 question.  
 25

Page 22

1 BY MR. GRIFFIS:  
 2 Q. Now, when did you first meet Christopher  
 3 Portier, sir?  
 4 MS. WAGSTAFF: Objection. Again,  
 5 outside the scope of the allowed deposition.  
 6 Monsanto asked to explore the mechanisms,  
 7 subgroups, conclusions about glyphosates.  
 8 And Dr. Portier was not even on the monograph  
 9 team.  
 10 MR. WHITE: Answer only to the extent  
 11 that you know.  
 12 A. I met him the first time at Lyon, at the  
 13 IARC meeting volume 112.  
 14 BY MR. GRIFFIS:  
 15 Q. At the introductory meeting?  
 16 A. At the first day of the meeting.  
 17 Q. And on the first day, there was an  
 18 introductory welcome meeting where everybody got  
 19 together, and there were some speeches; is that  
 20 right?  
 21 A. I wouldn't call it speeches.  
 22 Introductions of each member of -- and the panel.  
 23 Q. Did everyone sit down together, and  
 24 people stood up and spoke a little bit about  
 25 themselves or about one another by way of

Page 23

1 introduction?  
 2 A. Yes.  
 3 Q. Did Mr. Portier introduce himself when  
 4 he was talking about himself, or did anyone  
 5 identify him as a current or former member of the  
 6 Environmental Defense Fund?  
 7 MS. WAGSTAFF: Again, I am going to  
 8 object -- have a standing objection to  
 9 questions about Chris Portier. As I have  
 10 said, before he was not even a member of the  
 11 group, and he was not in the mechanism  
 12 subgroup.  
 13 MR. WHITE: You're fine.  
 14 A. So he -- in the IARC list of  
 15 participants, he had disclosed consulting for the  
 16 Environmental Defense Fund. That was presented  
 17 even before the meeting.  
 18 BY MR. GRIFFIS:  
 19 Q. You were given everybody's declaration  
 20 of interests before the meeting?  
 21 A. Yes. There was a list of declaration of  
 22 interests, and on that day, we had to sign if  
 23 there had been any other conflicts of interest,  
 24 potential conflicts of interest that needed to be  
 25 disclosed on that very first day. There was a

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1 form we had to sign.  
 2 Q. There was a supplemental declaration you  
 3 filled out on the first day? How far before --  
 4 how long before the first meeting in Lyon did you  
 5 receive other people's declaration of interests?  
 6 A. I believe -- if I recall, it was on the  
 7 website of the IARC volume 112 meeting. When the  
 8 participants are listed, their conflicts of  
 9 interest were listed on that particular form that  
 10 was on the website. I don't remember the time  
 11 that showed up on the web, though.  
 12 MR. GRIFFIS: All right. Let's take  
 13 five minutes so I can organize the next few  
 14 exhibits.  
 15 VIDEOGRAPHER: Off the record at 9:55.  
 16 (A short recess was taken.)  
 17 (Exhibit No. 13-6 marked for  
 18 identification.)  
 19 VIDEOGRAPHER: Back on the record at  
 20 10:07.  
 21 BY MR. GRIFFIS:  
 22 Q. Okay. Dr. Ross, I have marked as --  
 23 during the break, I marked as Exhibit 6 this  
 24 deposition and handed you a copy of your  
 25 declaration of interest for IARC working group

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1 112, correct?  
 2 A. Yes.  
 3 Q. That's what that is?  
 4 A. Yes.  
 5 Q. Okay. On the third page of that  
 6 document, in the box that says Nos. 5 through 6,  
 7 you disclosed as one of your interests being on  
 8 the advisory panel for the Agricultural Health  
 9 Study; is that right?  
 10 A. Yes.  
 11 Q. And you wrote that you provided  
 12 expertise on study design, data interpretation,  
 13 and advice, correct?  
 14 A. Yes.  
 15 Q. When you were given information about  
 16 other people's declaration of interests, including  
 17 Mr. Portier's, did you see them in this form, or  
 18 were you just given copies of other people's forms  
 19 that they filled out?  
 20 A. I don't recall receiving their conflict  
 21 of interests or declaration of interest in this  
 22 form.  
 23 Q. In what form do you recall receiving it?  
 24 A. What is on the -- was on the website --  
 25 the IARC website for the meeting and the list



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1 of -- the list of participants form that was at  
 2 the meeting. Conflicts of interest were shown on  
 3 that form.  
 4 Q. Okay. I want to mark this as Exhibit 7.  
 5 (Exhibit No. 13-7 marked for  
 6 identification.)  
 7 BY MR. GRIFFIS:  
 8 Q. It is another document that you  
 9 produced, sir, entitled -- headed "IARC  
 10 International Agency for Research on Cancer,"  
 11 entitled, "Subgroup 4, working group members."  
 12 MS. WAGSTAFF: I'm just going to object  
 13 that there's no Bates number on this or  
 14 there's no production number or any sort of  
 15 identifying number. But I assume it's  
 16 authentic.  
 17 MR. GRIFFIS: It is.  
 18 BY MR. GRIFFIS:  
 19 Q. And this is a document that you received  
 20 from IARC listing subgroup 4, working group  
 21 members, sir?  
 22 A. It appears that way, yes.  
 23 Q. And you were on -- in working group 4  
 24 along with Dr. Rusyn as subgroup chair, correct?  
 25 A. Yes.

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1 Q. Frank LeCurieux? Did I pronounce that  
 2 right?  
 3 A. Uh-huh (affirmative response).  
 4 Q. Matthew Martin, William -- and Lauren  
 5 Zeise. And invited specialist for subgroup 4 was  
 6 Christopher Portier, correct?  
 7 A. Yes.  
 8 Q. And he's -- his affiliations here are  
 9 listed only as retired; is that right?  
 10 A. Yes.  
 11 Q. Now, I've asked you about some of these  
 12 people.  
 13 Did you know Mr. LeCurieux before  
 14 joining working group 4?  
 15 A. No.  
 16 Q. Did you know Mr. Martin?  
 17 A. No.  
 18 Q. You met all of these people for the  
 19 first time in Lyon; is that correct?  
 20 MS. WAGSTAFF: Objection to the form.  
 21 MR. WHITE: You can answer.  
 22 A. Yes.  
 23 MS. WAGSTAFF: You talking about in  
 24 person that he met them before the meeting?  
 25 MR. GRIFFIS: Before being in Lyon is

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1 what I'm asking.  
 2 MS. WAGSTAFF: Uh-huh (affirmative  
 3 response).  
 4 A. I had not met them before Lyon.  
 5 MR. GRIFFIS: Okay.  
 6 (Exhibit No. 13-8 marked for  
 7 identification.)  
 8 BY MR. GRIFFIS:  
 9 Q. Exhibit 13-8. I'm sorry. I shouldn't  
 10 have said putting 13. We are putting "13-" in  
 11 front of everything. But it's Exhibit 8 to this  
 12 deposition. Sorry. Is a -- an overview of  
 13 assignments for -- for group 4 for all of the  
 14 substances being investigated; is that right?  
 15 A. Not only group 4. There --  
 16 Q. Yes, sir. All of the groups.  
 17 A. For -- for it appears to be all of  
 18 the -- all of the four -- four groups.  
 19 Q. And would you quickly review for the  
 20 jury what pesticides were being examined by  
 21 working group 112?  
 22 MS. WAGSTAFF: Objection to scope.  
 23 A. First we worked on malathion, parathion,  
 24 diazinon, tetrachlorvinphos and glyphosate.  
 25

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1 BY MR. GRIFFIS:  
 2 Q. Now, do you know, sir, how those  
 3 substances were selected to be reviewed by working  
 4 group 112?  
 5 MS. WAGSTAFF: Speculation.  
 6 A. I don't.  
 7 BY MR. GRIFFIS:  
 8 Q. Did you learn at any time that  
 9 glyphosate wasn't originally on the list?  
 10 MS. WAGSTAFF: Objection to foundation.  
 11 A. I had no knowledge of that.  
 12 BY MR. GRIFFIS:  
 13 Q. Okay. Did you learn at any time that  
 14 Mr. Portier was involved in getting glyphosate  
 15 added to the list?  
 16 MS. WAGSTAFF: Objection. Foundation.  
 17 A. I have no knowledge of that.  
 18 BY MR. GRIFFIS:  
 19 Q. Let's look at Exhibit 8, the assignments  
 20 list, sir, and focus on glyphosate.  
 21 And this overview of assignments,  
 22 what work -- what does it mean to be assigned a  
 23 subsection?  
 24 A. So in my -- in my case, my  
 25 responsibility was to review the toxicokinetic

1 data on glyphosate.

2 Q. And --

3 A. I was responsible for drafting the  
4 documents on the toxicokinetic data.

5 Q. And how far in advance did you receive  
6 your assignment with regard to glyphosate?

7 MS. WAGSTAFF: Objection to the form.

8 A. At approximately six months before the  
9 meeting, I received assignments.

10 BY MR. GRIFFIS:

11 Q. And what were you supposed to do in  
12 response to this those assignments?

13 A. We were charged with evaluating the  
14 published literature -- in my particular case, the  
15 toxicokinetic data on glyphosate in the published  
16 literature in publicly available literature and to  
17 synthesize a review of what is known regarding the  
18 toxicokinetics of glyphosate.

19 Q. And you prepared a written product from  
20 that, sir?

21 A. Yes.

22 Q. What was that written product?

23 A. It was the review of the toxicokinetic  
24 data regarding glyphosate.

25 Q. Was a draft of what ultimately became

1 A. We were asked to do peer review of  
2 certain sections. I did not do peer review of all  
3 the sections. We were assigned certain drafts to  
4 peer review before traveling to Lyon.

5 BY MR. GRIFFIS:

6 Q. How far in advance was that?

7 A. Approximately two to three months.

8 Q. With regard to glyphosate, which  
9 sections were you involved in reviewing?

10 A. Let me see here. I believe the one  
11 section that I peer reviewed for the meeting was  
12 4.2.3 oxidative stress inflammation and the immune  
13 suppression.

14 Q. Which was drafted by who?

15 A. Dr. Ivan Rusyn.

16 Q. Did you provide comments to that  
17 section?

18 A. Yes.

19 Q. During this process of preparing drafts  
20 and sending drafts, how were you sending and  
21 receiving drafts?

22 A. We used a server -- IARC server, IOPS  
23 system where we would upload drafts of the  
24 documents or peer reviews of a document that we  
25 needed to upload on to the server.

1 the toxicokinetic data section of the IARC working  
2 group 112 monograph?

3 A. Yes.

4 Q. And did you have responsibility for  
5 writing sections for other substances, as well?

6 A. No.

7 Q. I see you listed under toxicokinetic  
8 data for tetrachlorvinphos?

9 A. Correct. So my charge was to write --  
10 to review the toxicokinetic data for each of the  
11 five compounds that were being evaluated under  
12 volume 112.

13 Q. Okay. Before arriving in Lyon, in March  
14 of 2015, you were to prepare drafts of  
15 toxicokinetic data sections for malathion,  
16 parathion, diazinon, glyphosate, and  
17 tetrachlorvinphos; is that right?

18 A. Yes.

19 Q. And other people were doing the same for  
20 other sections, right?

21 A. Whatever was listed in this overview of  
22 assignments, that's -- that was their charge.

23 Q. When did you see other people's drafts  
24 in your subsection, in group 4?

25 MS. WAGSTAFF: Object to form.

1 Q. And were you -- were you given a user  
2 name and password for IOPS?

3 A. Yes.

4 Q. And when you logged on to IOPS, what did  
5 you have access to from working group 112?

6 MS. WAGSTAFF: I'm going to object to  
7 the questions about drafts of IARC based on  
8 Judge Charbri's (phonetic) order saying that  
9 IARC drafts are IARC property, immune from  
10 subpoena, pursuant to 22-USC-288-A,  
11 subsection B, and 919-F, sub 2B-43.

12 BY MR. GRIFFIS:

13 Q. Go ahead, sir.

14 A. Can you repeat the question?

15 Q. Sure. What did you have access to  
16 regarding working group 112 on IOPS?

17 A. So we could -- certainly, we would have  
18 access to our subgroup. We could access any of  
19 the documents that were being produced by the  
20 other subgroups if we wanted to read through them.  
21 So you could start looking at drafts before  
22 arriving in Lyon.

23 Q. Could you look at what studies had been  
24 tagged by your group and by other groups?

25 MS. WAGSTAFF: Same objection.

1 A. I don't recall.  
 2 BY MR. GRIFFIS:  
 3 Q. Did you participate in tagging studies  
 4 for review?  
 5 A. For the toxicokinetic data, yes. I was  
 6 charged with tagging some of the documents, yes.  
 7 Q. When you were given your assignment, had  
 8 other people already tagged toxicokinetic  
 9 documents for you?  
 10 A. No.  
 11 Q. So did you pretty much do all of the  
 12 work of tagging toxicokinetic documents?  
 13 A. I believe I did.  
 14 Q. Was there a way for you to tag documents  
 15 in other categories, or do you know?  
 16 A. I don't recall that. Whether I could  
 17 tag documents in oxidative stress, I don't recall  
 18 that.  
 19 Q. Okay. How -- if you wanted tag a --  
 20 and when we say tag a document, we're talking  
 21 about a study?  
 22 A. Yes. A published study in the public --  
 23 in the publicly available literature.  
 24 Q. What was the process for tagging  
 25 studies?

1 Q. Okay. And were you given a user name  
 2 and password for HAWC?  
 3 A. Yes.  
 4 MS. WAGSTAFF: Same objection. IARC  
 5 drafts and work product.  
 6 BY MR. GRIFFIS:  
 7 Q. What was the difference between what you  
 8 were doing on IARC and what you were doing on  
 9 HAWC?  
 10 A. I don't recall. I don't recall the  
 11 difference. I think the IOPS system was simply a  
 12 way to upload documents, and HAWC was the software  
 13 that allowed us to tag documents to include or  
 14 exclude an evaluation.  
 15 Q. So the tagging would have actually been  
 16 taking place on HAWC, and if you wanted to share a  
 17 document with the group, it would go through IOPS;  
 18 is that right?  
 19 A. I don't recall the specifics of sharing  
 20 PDFs of the actual studies. I don't recall.  
 21 Q. Okay. Did HAWC also have tools for  
 22 doing data analysis?  
 23 A. Not for the toxicokinetics.  
 24 Q. You didn't see any data analysis modules  
 25 on HAWC for working group 112?

1 A. In my case, it was directly related to  
 2 toxicokinetic data, whether it described the  
 3 absorption, distribution, metabolism, and  
 4 excretion of glyphosate.  
 5 Q. Yes, sir. I'm asking something a little  
 6 bit different.  
 7 Let's say if you had a study in  
 8 mind that you wanted to tag. What would you  
 9 actually do on the computer to tag it?  
 10 A. We would evaluate the abstracts. And if  
 11 it clearly looked relevant, we would tag them  
 12 right then and there. If we were uncertain about  
 13 the relevance, I would try to get access to the  
 14 copy of the full article to -- if the abstract  
 15 wasn't revealing to me enough about the relevance  
 16 of the article, I would try to get a copy of the  
 17 actual -- the full article to include it or not  
 18 include it.  
 19 Q. Was there a box to check to tag or not  
 20 tag documents?  
 21 A. We had some mechanism of including or  
 22 excluding the study in our evaluation.  
 23 Q. Now, there was also an online system  
 24 called the HAWC, H-A-W-C; is that right?  
 25 A. Yes.

1 A. I don't recall ever seeing those.  
 2 Q. Did you see any modules that were --  
 3 could be used to manipulate or generate  
 4 statistical analyses of data?  
 5 A. No.  
 6 Q. Okay. Did HAWC have capacities that you  
 7 were aware of to process or store or display data  
 8 from studies in any way?  
 9 A. Not that I am aware of.  
 10 Q. Okay. So if I want to summarize the  
 11 IOPS and HAWC so perhaps we can move on from it,  
 12 from what you used those two systems for, then,  
 13 would have been, one, to tag literature in your  
 14 assigned areas for these various documents, i.e.,  
 15 toxicokinetic data; and, two, with regard to the  
 16 IOPS system to upload your draft sections on  
 17 toxicokinetics and to download any drafts that you  
 18 wanted to read that other people had done.  
 19 Is that right?  
 20 MS. WAGSTAFF: Objection. You're  
 21 testifying. That record speaks for itself.  
 22 A. The HAWC system was used for tagging  
 23 studies for inclusion or exclusion. And IOPS was  
 24 used for uploading documents, and we could access  
 25 other -- other documents in the -- in the IOPS

1 system, other drafts.

2 BY MR. GRIFFIS:

3 Q. And was there anything else that you  
4 used either of those systems for other than what  
5 we just talked about?

6 A. No.

7 Q. Okay. Explain to the jury what  
8 toxicokinetics is, please.

9 A. Toxicokinetics relates to the  
10 absorption, distribution, metabolism, and  
11 excretion of a particular chemical in the body.

12 Q. So it's -- is it a fair summary to say  
13 how a chemical moves through the body from start  
14 to finish?

15 A. Yes.

16 Q. Okay. And toxicokinetics were the only  
17 sections you were responsible for before showing  
18 up in Lyon; is that right?

19 A. Yes.

20 MS. WAGSTAFF: Object to the form.

21 BY MR. GRIFFIS:

22 Q. Would you have reviewed studies in the  
23 other working group 4 subareas like receptor  
24 mediated effects, altered self proliferation,  
25 cancer susceptibility data, et cetera, other than

1 A. Reading the draft and providing comments  
2 on the draft document.

3 Q. Did you review any of the studies?

4 A. That were in the draft?

5 Q. Yes, sir. In those two to three hours,  
6 did you actually read any of those studies that  
7 were cited therein?

8 A. I don't recall.

9 (Exhibit No. 13-9 marked for  
10 identification.)

11 BY MR. GRIFFIS:

12 Q. Dr. Ross, I marked as Exhibit 9 a  
13 working group 112 meeting timetable that you  
14 produced, and that is what's in front of you; is  
15 that right?

16 A. I didn't produce this. You mean -- what  
17 do you mean produced?

18 Q. I'm sorry. I'm being a lawyer when I  
19 say "produced." We asked you to provide us with  
20 documents that IARC -- and you turned those  
21 documents over, and I'll ask you a little bit more  
22 about how you did that exactly. But we ultimately  
23 received documents from you, and this is one of  
24 the documents that we received.

25 So this is one of the documents

1 toxicokinetics, of course, before showing up in  
2 Lyon?

3 A. I was charged with peer reviewing the  
4 oxidative stress drafts before showing up in Lyon.

5 Q. Did you review the oxidative stress  
6 drafts for all of the substances?

7 A. I don't recall.

8 Q. Did you have different assignments than  
9 oxidative stress from some of the other  
10 substances?

11 A. I did. I -- yes.

12 Q. Do you recall if you had one assignment  
13 for each substance -- one peer review assignment  
14 for each substance?

15 A. I don't recall.

16 Q. Okay. Do you recall about how many peer  
17 review assignments you had total?

18 A. I can't remember exactly. Maybe three,  
19 maybe four.

20 Q. How many hours of work do you think you  
21 put into the peer review of glyphosate oxidative  
22 stress section?

23 A. Two to three hours.

24 Q. And what did that -- those two to three  
25 hours of work entail?

1 that you provided to us in response to our  
2 document request which is Exhibit 3; is that  
3 right?

4 A. Yes.

5 Q. Okay. And this is a timetable that I  
6 take it you received from IARC for working group  
7 112, right?

8 A. Yes.

9 Q. Okay. And it shows activities from the  
10 evening of March 2nd through the afternoon of  
11 March 10th of 2015, right?

12 A. Yes.

13 Q. Okay. And on March 2nd, the only  
14 activity is an evening meeting -- an evening  
15 planning meeting between meeting chairs and  
16 subgroup chairs only, correct?

17 A. That's correct.

18 Q. Were you involved in that?

19 A. No.

20 Q. Okay. Would you have first started  
21 meeting people on the 3rd?

22 MS. WAGSTAFF: Object to the form.

23 A. Yes.

24 BY MR. GRIFFIS:

25 Q. Do you remember when you got into Lyon?

1 A. March 2nd.  
 2 Q. Okay. And did you not head over to IARC  
 3 until March 3rd?  
 4 A. Correct.  
 5 Q. All right. And when did you leave Lyon?  
 6 MS. WAGSTAFF: I am going to object to  
 7 these questions. This has nothing to do with  
 8 the requested discovery of the mechanisms,  
 9 subgroup conclusions about glyphosate -- when  
 10 he arrived and when he left Lyon. You're  
 11 just badgering the witness.  
 12 BY MR. GRIFFIS:  
 13 Q. Go ahead, sir.  
 14 A. Wednesday, March 11th.  
 15 Q. Okay. And when you talked earlier about  
 16 introductions, meeting people, was that during the  
 17 opening session of March 3rd, sir?  
 18 A. Correct.  
 19 Q. Now, there were -- there were a number  
 20 of subgroup sessions listed on the 3rd, 4th, 5th,  
 21 6th, and 7th of March.  
 22 What is a subgroup sessions?  
 23 A. These are the times where each subgroup  
 24 meets together to evaluate the drafts.  
 25 Q. And there's also evenings of the 3rd,

1 4th, 5th, and 6th, something called a coronating  
 2 meeting for the co-chairs and subgroup chairs,  
 3 correct?  
 4 A. Yes.  
 5 Q. Were you involved in that?  
 6 A. No.  
 7 Q. Okay. And so the subgroup sessions --  
 8 there were 11 of them that you attended; is that  
 9 right?  
 10 MS. WAGSTAFF: Objection. Foundation.  
 11 Doesn't even show how it was followed.  
 12 A. There are 11 subgroup sessions listed on  
 13 this.  
 14 BY MR. GRIFFIS:  
 15 Q. Did you go to all of them?  
 16 A. Yes.  
 17 Q. Were there subgroup sessions that were  
 18 held that weren't listed on this on the itinerary?  
 19 A. We would meet to -- if there was an  
 20 important topic that needed to be raised within  
 21 the subgroup outside of this 11.  
 22 Q. What percentage of the working group 4's  
 23 time was spent on glyphosate as opposed to one of  
 24 the other four pesticides under review?  
 25 A. So we had five compounds. I would

1 estimate we spent 20 percent of them the time.  
 2 Q. About evenly divided?  
 3 A. Yes.  
 4 Q. And what percentage of that time would  
 5 you have spent talking about the issues of  
 6 genotoxicity and oxidative stress?  
 7 A. In the subgroup sessions a lot of the  
 8 time was spent on those issues.  
 9 Q. Lot of the glyphosate time would been  
 10 spent on those two issues?  
 11 A. Correct.  
 12 Q. Okay. All right. And who was involved  
 13 on behalf of group 4 in coordination meetings?  
 14 A. You are referring to the meeting at the  
 15 end the coordination meeting for cochairs?  
 16 Q. Meeting at the end of early of days the  
 17 3rd, 4th, 5th, 6th. That says coordination  
 18 meeting for the cochairs and subgroup chairs?  
 19 A. That would have been our subgroup chair  
 20 of group 4.  
 21 Q. Dr. Rusyn?  
 22 A. Dr. Rusyn would have been participating  
 23 in those.  
 24 Q. Do you know if Chris Portier was at  
 25 those?

1 A. I don't believe so. He -- no. I don't  
 2 think he was.  
 3 Q. Did you witness people going off into  
 4 those meetings, or were you off doing your own  
 5 thing by then?  
 6 A. No. I didn't witness.  
 7 Q. All right. Mr. Portier is listed as an  
 8 invited specialist for group 4. That's in the  
 9 Exhibit 7, I believe, sir.  
 10 What was your understanding of what  
 11 he was an invited specialist for, for group 4?  
 12 A. So Dr. Portier is a biostatistician, and  
 13 he was invited as a specialist to help peer review  
 14 the tox cast data that was being presented.  
 15 Q. For any other purpose?  
 16 A. Not that I am aware of.  
 17 Q. Did he speak to your group, address your  
 18 group about issues other than tox cast data?  
 19 A. He acted as a peer reviewer.  
 20 Q. If he were to give an opinion to the  
 21 group on the subject of biostatistics and a  
 22 analysis -- a reanalysis of biostatistics, would  
 23 you be qualified to evaluate the scientific merit  
 24 of that opinion?  
 25 MS. WAGSTAFF: Objection. Calls for

1 speculation and hypothetical. You can't just  
2 say any opinion Chris Portier gives.

3 A. I'm not a biostatistician. It's not my  
4 area of expertise.

5 BY MR. GRIFFIS:

6 Q. Okay. So if Chris Portier or another  
7 biostatistician gives a biostatistics opinion, you  
8 wouldn't be qualified as a peer to second guess  
9 that opinion.

10 Is that fair?

11 MS. WAGSTAFF: Objection. Hypothetical.  
12 Calls for speculation. You don't know what  
13 opinion you're talking about.

14 A. Yeah. It would depend on the  
15 conversation. Clearly, I can understand the  
16 importance of statistical significance and whether  
17 an effect is statistically significant, but my  
18 area of expertise was on toxicokinetics.

19 BY MR. GRIFFIS:

20 Q. You were focused on the toxicokinetics  
21 during these conversations and not on  
22 biostatistics or the other areas listed.

23 Is that fair?

24 MS. WAGSTAFF: Objection. Misstates the  
25 record. That's not what the deponent said.

1 A. My main responsibility was the  
2 toxicokinetic sections.

3 BY MR. GRIFFIS:

4 Q. Were you asked by IARC to read their  
5 preamble.

6 Do you know what I'm talking about  
7 when I say the preamble?

8 A. Yes. And I did read it.

9 Q. Okay. You were asked by IARC to read  
10 that?

11 A. Yes.

12 Q. Okay. As part of your preparation for  
13 to participate in working group 112?

14 A. Correct.

15 Q. What was your understanding of the  
16 purpose for your review of the preamble and how it  
17 was to guide you if it was?

18 A. Repeat the question.

19 Q. Yes, sir. What was your understanding  
20 of -- I will make it a little simpler.

21 What was your understanding of why  
22 you were being asked to review the preamble?

23 A. It is a guiding document for how the  
24 meeting is run, how we evaluate the information,  
25 the data that we asked to review. And it provides

1 a rubric for how the classifications are made.  
2 (Exhibit No. 13-10 marked for  
3 identification.)

4 BY MR. GRIFFIS:

5 Q. Marked as exhibit 10 is a copy of the  
6 IARC preamble.

7 That is what you reviewed, sir?

8 A. This says 2006. I don't know if there  
9 was a -- what -- if this was the actual document.  
10 But the preamble -- whatever they have on their  
11 website -- they have it on their website -- is  
12 what we read. And they had this a hard  
13 document -- a hard copy on the first day of the  
14 meeting.

15 Q. Okay. So everybody would have to read  
16 it in advance, and everyone was also given a hard  
17 copy on the first day; is that right?

18 A. Correct.

19 Q. Okay. And one thing you just told me  
20 earlier is that this provided a rubric for your  
21 evaluation.

22 Would you explain what you mean by  
23 a rubric for your evaluation?

24 A. In terms of mechanistics subsection,  
25 there were key characteristics of carcinogens that

1 were evaluated. There's ten key characteristics.  
2 And we were asked to provide -- as a subgroup to  
3 provide qualitative descriptors of strong,  
4 moderate, or weak in terms of the evidence for  
5 each particular character -- key characteristic.

6 Q. Okay.

7 A. It...

8 Q. Sorry. Were you done?

9 A. Yes.

10 Q. Okay. So there were ten key  
11 characteristics.

12 And these are different categories  
13 of mechanism; is that right?

14 A. These are -- yes. Different categories,  
15 different mechanisms by which a carcinogen may act  
16 to cause human cancer.

17 Q. Do you know the source of those ten  
18 characteristics?

19 A. There is an environmental health  
20 perspectives study or paper that lays out the ten  
21 key characteristics. It is in the published  
22 literature.

23 Q. Okay. Do you know when that was  
24 published?

25 A. I believe it was in 2016.

1 Q. Okay. Do you know if it was published  
2 before or after your working group met?

3 A. It -- this is -- the formal document  
4 came out in 2016, but the characteristics were  
5 listed on the IARC website where somewhere IARC  
6 had a listing of these key characteristics that  
7 the subgroup was charged with evaluating.

8 Q. Do you know if those had been submitted  
9 to the publication in peer review process before  
10 working group 112 met?

11 A. I don't recall that.

12 Q. It was published in 2016.

13 You don't know when might been peer  
14 reviewed; is that right?

15 A. I don't --

16 MS. WAGSTAFF: Objection. He said that  
17 the ten key characteristics were listed on  
18 the IARC website. That has nothing to do  
19 with whether or not it was published.

20 Because some author decided to turn it into a  
21 publication is irrelevant.

22 BY MR. GRIFFIS:

23 Q. And the classifications that you could  
24 give for each of the ten characteristics were --  
25 repeat them, please.

1 A. We didn't -- if the evidence was weak,  
2 we didn't -- we didn't have to spend a lot of time  
3 on that evidence. If it was strong, there was a  
4 clearly -- in the monograph, there was a statement  
5 to that effect, that the evidence was strong based  
6 on the evidence -- the papers were deemed  
7 important.

8 BY MR. GRIFFIS:

9 Q. Well, all I'm asking you right now,  
10 though, is your three choices were weak, moderate,  
11 and strong, right?

12 A. Those were our descriptors.

13 MR. GRIFFIS: Okay. Take a break at  
14 this point.

15 VIDEOGRAPHER: All right. Off record at  
16 10:44 a.m.

17 (A short recess was taken.)

18 VIDEOGRAPHER: Back on record, 10:56.

19 BY MR. GRIFFIS:

20 Q. Dr. Ross, you told us earlier that your  
21 group divided its time pretty evenly among the  
22 five substances that were being reviewed,  
23 including glyphosate.

24 So you estimated about 20 percent  
25 of your time was spent on glyphosate, right?

1 Weak?

2 A. The qualitative descriptors?

3 Q. Yes. The qualitative descriptors.

4 A. Those were weak, moderate, or strong.  
5 And those come from the preamble.

6 Q. Okay. And so for each of the ten -- so  
7 any study would be divided into one or more of the  
8 key characteristics and used to evaluate mechanism  
9 under the rubric of that characteristic; is that  
10 fair?

11 MS. WAGSTAFF: Objection. Misstates the  
12 testimony.

13 A. There -- the papers that were related to  
14 genotoxicity -- the evidence based on genotoxicity  
15 or oxidative stress were bin -- so papers within  
16 those -- since those are the two characteristics  
17 that were deemed strong, those papers were within  
18 each of those bins.

19 BY MR. GRIFFIS:

20 Q. Okay. And so it would be sorted into  
21 the ten bins. And then as to each bin, the group  
22 was asked to conclude one of three things: Weak,  
23 moderate, or strong; is that right?

24 MS. WAGSTAFF: Objection. Misstates the  
25 testimony.

1 A. We spent approximately equal time on all  
2 compounds.

3 Q. So is it fair to say that your working  
4 group, when it was working together, did the  
5 equivalent of about a day's work on glyphosate  
6 during work group 112?

7 MS. WAGSTAFF: Objection. Misstates the  
8 record. Who knows what a day's work means.

9 A. We had several days on glyphosate.

10 BY MR. GRIFFIS:

11 Q. And those same days were also spent on  
12 other substances, right?

13 A. There were other substances discussed in  
14 a given day.

15 Q. When I say one day's work, I didn't mean  
16 to suggest to you set aside one particular day to  
17 focus on that and moved on. I was trying to get a  
18 sense of, over this week, how much total work went  
19 into it? Was it about a day's work --

20 MS. WAGSTAFF: Object to the form.

21 BY MR. GRIFFIS:

22 Q. -- divided over multiple days?

23 MS. WAGSTAFF: Same.

24 A. It was more than one day's work.  
25

1 BY MR. GRIFFIS:

2 Q. Okay. There were --

3 A. Several days work.

4 Q. How many days -- during how many of  
5 these days was work done on? I am looking at  
6 Exhibit 9, the timetable.

7 A. It doesn't say which -- for each  
8 subgroup sessions, it doesn't say which compounds  
9 we were working on at the time.

10 MS. WAGSTAFF: I'm going to object  
11 also -- Dr. Ross said they met at night when  
12 needed.

13 BY MR. GRIFFIS:

14 Q. So there was actual work done on March  
15 3rd, on March 4th, on March 5th, on March 6th,  
16 correct?

17 A. Subgroups, 3rd, 4th, 5th, and 6th, 7th,  
18 we met in subgroup. Those were the times we were  
19 meeting in subgroup. There was work being done on  
20 Sunday. There was reading over drafts. There was  
21 work being done in the evening.

22 Q. How many total -- on how many total days  
23 during your time in Lyon was work being done on  
24 glyphosate?

25 MS. WAGSTAFF: Object to the form.

1 A. I don't recall how many days. There  
2 were several days we were meeting to -- with each  
3 of the compounds. And I don't recall the exact  
4 number of days that we've -- that we were on  
5 glyphosate.

6 BY MR. GRIFFIS:

7 Q. Well, the 3rd through the 10th is seven  
8 days. Fair?

9 A. Yeah. Yeah. Eight days if you count  
10 Tuesday.

11 Q. Okay. Do we count Tuesday? Was  
12 substantive work done on Tuesday?

13 A. Yes.

14 Q. Okay. Eight days total were spent in  
15 Lyon doing this work, right? Five substances were  
16 involved. And you told us your work was divided  
17 evenly?

18 MS. WAGSTAFF: Going --

19 BY MR. GRIFFIS:

20 Q. Can we conclude that the amount of work  
21 done on glyphosate was eight divided by five?

22 MS. WAGSTAFF: I'm going to object to  
23 this question on the suggestion that all the  
24 work was done in Lyon. He has testified  
25 numerous times that months of work were put

1 into this prior to the meeting.

2 A. We had our assignments six months before  
3 the meeting. So there was six months of work  
4 being done before we met in Lyon.

5 BY MR. GRIFFIS:

6 Q. Yes, sir.

7 You testified you worked on the  
8 toxicokinetic data and that you did a peer review  
9 that took two to three hours of work. Let me --  
10 let me clarify something. It's a point I made a  
11 little earlier, but I didn't ask you in that last  
12 question.

13 When the group was working  
14 together, in whole group work together, the total  
15 amount of time you could spent on glyphosate,  
16 given your testimony, working together, would have  
17 been eight days divided by five substances; is  
18 that right?

19 MS. WAGSTAFF: Objection. Misstates the  
20 testimony.

21 A. Repeat the question now.

22 BY MR. GRIFFIS:

23 Q. Okay. And let's first address the work  
24 before you showed up.

25 It would not have been the case

1 that the entire group was focusing on oxidative  
2 stress or the entire group was focusing on  
3 genotoxicity or the entire group was focusing on  
4 any other of the ten characteristics that were  
5 binned with regard to glyphosate prior to meeting  
6 in Lyon; is that right?

7 MS. WAGSTAFF: Objection. Dr. Ross  
8 can't testify to what other panelists were  
9 focusing on.

10 A. My focus was on the toxicokinetics.  
11 That is what I was responsible for. And I was  
12 responsible for peer reviewing the draft on  
13 oxidative stress prior to the meeting.

14 BY MR. GRIFFIS:

15 Q. So prior to the meeting, you spent about  
16 two to three hours peer reviewing the oxidative  
17 stress draft.

18 And other than that, you were  
19 focusing on solely toxicokinetic data prior to  
20 showing up at IARC, right?

21 MS. WAGSTAFF: Objection. Misstates  
22 testimony.

23 A. I was working on peer reviews of other  
24 compounds -- others than were not related to  
25 glyphosate.



1 BY MR. GRIFFIS:

2 Q. Okay. I do mean to limit myself to  
3 glyphosate in that question.

4 A. So the peer -- when I say the peer  
5 review takes two to three hours, that's just the  
6 reading of the document. That does not include  
7 the amount of time in responding point by point to  
8 the author.

9 Q. How much time did you take doing that?

10 A. Must have -- oh, at least a day. And I  
11 did -- I did look up some methodology papers and  
12 some of the -- some of the citations I did look up  
13 what type of method they were using for their  
14 oxidative stress measurements. So that would take  
15 some time, as well.

16 Q. How much additional time?

17 A. That probably would take about an hour  
18 to two hours look at that information.

19 Q. So about a day and half total work for  
20 the peer-review process work for oxidative stress?

21 A. Roughly, yes.

22 Q. Okay. And you've -- you were not  
23 focused on the genotox prior showing up in Lyon;  
24 is that correct?

25 MS. WAGSTAFF: Objection to the form.

1 the drafts. That was the first time we were all  
2 together.

3 Q. Okay. And as a group, the total amount  
4 of time you could have spent was about eight days  
5 divided by five substances on glyphosate; is that  
6 fair?

7 MS. WAGSTAFF: Object to form. He  
8 stated that they spent 20 percent of the  
9 subgroup session. He also stated they worked  
10 at night and evening. He never said that was  
11 20 percent.

12 A. We -- there were some nights we would  
13 work on -- I would work on one compound through  
14 the night, glyphosate. So I can't -- I don't know  
15 the exact number of hours on glyphosate --

16 BY MR. GRIFFIS:

17 Q. Okay.

18 A. -- during the eight days.

19 Q. There were plenary sessions in addition  
20 to the subgroup sessions, correct?

21 A. Yes.

22 Q. What is a plenary session?

23 A. Where all of the four subgroups come  
24 together.

25 Q. And the first plenary session was on the

1 A. I did not review the genotox --

2 BY MR. GRIFFIS:

3 Q. You weren't included -- sorry.

4 A. No.

5 Q. You weren't included in any discussions  
6 by the rest of the working group on genotox or  
7 oxidative stress or anything else that took place  
8 before showing up in Lyon; is that right?

9 MS. WAGSTAFF: Object to the form.

10 A. The oxidative stress I had a -- I had  
11 peer reviewed the draft before attending Lyon.

12 BY MR. GRIFFIS:

13 Q. Yes, sir. But the entire working group  
14 was not exchanging communications about the  
15 oxidated stress or genotox or anything else as a  
16 group prior to showing up in Lyon; is that right?

17 A. In terms of myself, I wasn't sharing  
18 except for the peer review of the oxidative  
19 stress. There may be others who had  
20 interactions before the meeting, but I am not  
21 aware of that.

22 Q. Can't have been the whole group because  
23 you were part of the whole group, and you didn't  
24 see it?

25 A. As a group, we met in Lyon to go through

1 morning of Wednesday, March 4th, and it was called  
2 evaluation criteria, right?

3 MS. WAGSTAFF: I'm going to go ahead and  
4 object to questions about plenary sessions,  
5 as Monsanto had an employee there. And,  
6 also, the request for this deposition was to  
7 "explore the mechanism subgroup's conclusions  
8 about glyphosate."

9 A. The question -- repeat your question.

10 BY MR. GRIFFIS:

11 Q. Yes, sir.

12 The first plenary session on the  
13 morning of Wednesday, March 4th -- which is held  
14 on the morning of Wednesday, March 4th, was on the  
15 subject of evaluation criteria, correct?

16 A. Yes.

17 Q. Was the preamble presented and discussed  
18 at that session?

19 A. Yes.

20 Q. Who --

21 A. And it was presented on March 3rd, as  
22 well.

23 Q. All right. Who was the speaker or  
24 speakers at that session?

25 MS. WAGSTAFF: Same objection.

1 A. Dr. Straif.  
 2 BY MR. GRIFFIS:  
 3 Q. Dr. Kurt Straif?  
 4 A. Yes.  
 5 Q. And was he the only speaker?  
 6 A. As I recall, yes.  
 7 Q. What did Dr. Straif tell you about the  
 8 criteria that you were to employ in evaluating the  
 9 substances?  
 10 A. If it is in the preamble.  
 11 Q. So he told you that the methodology that  
 12 should be applied during your review was what was  
 13 set forth in the preamble, sir?  
 14 A. Yes.  
 15 Q. The next two plenary sessions, the  
 16 mornings of the 5th and 6th were called progress  
 17 report.  
 18 What happened at the progress  
 19 report plenary sessions? I don't mean tell me  
 20 everything anyone said. But, in general, what was  
 21 the point of the progress report meeting?  
 22 A. A brief report on the previous day's  
 23 meetings amongst subgroups.  
 24 Q. Did the subgroup chairs present at those  
 25 meetings?

1 A. In general, yes.  
 2 Q. Okay.  
 3 A. It was the subgroup chair --  
 4 Q. Did anyone else --  
 5 A. -- present --  
 6 Q. Sorry.  
 7 A. I don't recall anyone else presenting.  
 8 Q. And what would the subgroup chairs --  
 9 what sort of thing would they report on? Let's  
 10 just confine ourselves to mechanism.  
 11 What would Dr. Rusyn report on to  
 12 the other groups?  
 13 A. So if --  
 14 MS. WAGSTAFF: Objection. Calls for  
 15 speculation.  
 16 A. He would report on, in terms of the ten  
 17 key characteristics, which of those ten might have  
 18 evidence that would be considered strong,  
 19 moderate, or weak.  
 20 BY MR. GRIFFIS:  
 21 Q. You were at all of these sessions,  
 22 right?  
 23 A. Yes.  
 24 Q. Okay. The evening of Friday, March 6th,  
 25 there was a plenary session called overview

1 discussion.  
 2 What was that about?  
 3 A. Plenary session overview was before the  
 4 group as a -- as the plenary session, it was  
 5 the -- it was the general overview of the  
 6 evaluations of each compound. We had not met to  
 7 go through the document line by line at that  
 8 point.  
 9 Q. The two progress reports that we just  
 10 talked about on the morning of the 5th and 6th  
 11 were scheduled to be ten minutes long.  
 12 Were those, in fact, short  
 13 meetings?  
 14 A. Yes.  
 15 Q. And then the evening session, the  
 16 overview discussion was an hour and 45 minutes,  
 17 right?  
 18 A. Yes, roughly. I don't remember the  
 19 exact time.  
 20 Q. Okay. Now, while you were in Lyon, you  
 21 were taking notes about the proceedings on the  
 22 spiral bound notebook, and you produced some of  
 23 those. Produced, again, meaning you turned them  
 24 over to your lawyers, and they did what they did  
 25 with them in response to request No. 3, right --

1 or Exhibit No. 3?  
 2 A. Yes.  
 3 Q. Okay. You had a spiral notebook, and  
 4 you would take notes by hand as to what was  
 5 happening that struck your interest.  
 6 Is that fair?  
 7 A. I don't -- the term "strike my  
 8 interest," I -- that's not relevant.  
 9 Q. Okay. Well, you would choose what to  
 10 write down and what not to write down, like anyone  
 11 does who's taking notes is all I meant.  
 12 A. Yes.  
 13 Q. Okay. Exhibit 11.  
 14 (Exhibit No. 13-11 marked for  
 15 identification.)  
 16 BY MR. GRIFFIS:  
 17 Q. What I've marked as Exhibit 11 is from  
 18 your spiral notebook, and these are notes from the  
 19 evening session on March 6th; is that right?  
 20 Titled "plenary general remarks"?  
 21 A. Yes.  
 22 Q. Okay. Now, this notebook --  
 23 MS. WAGSTAFF: Objection. Those are  
 24 from the evening session. There was two  
 25 plenary sessions on March 6th.

1 BY MR. GRIFFIS:

2 Q. The morning session was ten minutes  
3 long, and the evening session was much longer.  
4 Which one was this?

5 MS. WAGSTAFF: If you know.

6 A. I don't recall if it was from the  
7 morning or the evening.

8 BY MR. GRIFFIS:

9 Q. Okay. We have four pages of notes,  
10 right?

11 A. I don't recall which one it was from.

12 Q. Okay. This is from one of the plenary  
13 meetings of March 6th?

14 A. It's from March 6th. That's my...

15 Q. I'd like to talk about the notebook for  
16 a minute. Was this notebook only -- and these  
17 questions are about the process that you went  
18 through to respond to our request in document  
19 No. 3, the subpoena for production of documents.

20 Was this notebook devoted only to  
21 working group 112, or is it also a notebook that  
22 you used for other purposes?

23 A. It -- it was my -- it was a general  
24 notebook.

25 Q. So if we look back in February you might

1 send or not?

2 MR. WHITE: Only to your knowledge.

3 BY MR. GRIFFIS:

4 Q. Yeah. I am just asking if you know.

5 A. No. I don't know.

6 Q. Okay. And now let's go through your  
7 notes here, sir. Group 1, exposure.

8 Group 1 was the exposure group,  
9 right?

10 A. Yes.

11 Q. Who was presenting as the head of group  
12 1?

13 A. In this regard, these progress reports  
14 are general remarks that would have been the  
15 subgroup chair.

16 Q. Do you remember who that was?

17 A. For exposure, I'd have to look at the  
18 participant list.

19 Q. Okay. We have it. It's Exhibit 8.

20 MS. WAGSTAFF: Exhibit 8 is the  
21 assignment list.

22 MR. GRIFFIS: Yeah. The assignments is  
23 the closest we have to one with group 1 on  
24 it.  
25

1 have been writing about something you were doing  
2 in your lab or some other meeting that you went  
3 to; is that right?

4 A. Yes. You might have seen lab -- lab  
5 data that I had been working on.

6 Q. You --

7 A. Unrelated to volume 112.

8 Q. Sure. As one way of organizing your  
9 life, you keep a notebook keeping track of what  
10 you did and observed on various days?

11 A. Yes.

12 Q. Okay. So you pulled out the relevant  
13 notebook for when we provided you with that  
14 document request, Exhibit 3. You pulled out the  
15 relevant notebook and had copied the pages that  
16 pertained to working group 112; is that right?

17 A. Yes.

18 Q. Were there any notes from working group  
19 112 that you didn't have copied?

20 A. I provided everything that I had  
21 regarding volume 112.

22 Q. You provided those to your lawyers?

23 A. Yes.

24 Q. Okay. And do you know whether they  
25 applied any selection process in deciding what to

1 BY MR. GRIFFIS:

2 Q. Does the assignment list help you with  
3 that?

4 A. I think the list of participants says  
5 who the subgroup chairs are.

6 Q. Okay. The list of participants that we  
7 had from you was just for working group 4.

8 A. Let me just find -- which exhibit?

9 Q. Exhibit 8 is the one I was talking  
10 about, the one with the blue and white -- I see it  
11 here.

12 A. Oh, this one.

13 Q. No. There.

14 A. Oh, this one. Okay.

15 Q. Just see if that helps you remember who  
16 the chair was.

17 A. Trying to remember. I don't recall the  
18 group 1 subchair.

19 Q. Okay. That's fine, sir. The group 1  
20 chair, whoever that was, was reporting on exposure  
21 assessment as a yes/no process, correct?

22 MS. WAGSTAFF: Object to the form.

23 A. They -- yes or no? I don't know what  
24 you -- can you rephrase that?  
25

1 BY MR. GRIFFIS:

2 Q. Well, you wrote yes/no.

3 What did you mean?

4 A. I don't recall what I meant there.

5 Q. Okay. And you mentioned the  
6 Agricultural Health Study.

7 What point was made at this plenary  
8 session about the Agricultural Health Study with  
9 prior exposure assessment?

10 A. I don't recall. I don't know what  
11 compound this is -- this is relates to, which of  
12 the compounds.

13 Q. If you'll see, sir, on the first two  
14 pages were devoted to what looked like general  
15 comments. And then the next two pages were  
16 talking about specifics of various compounds. You  
17 have compounds listed over and over again on the  
18 last two pages and compounds generally not broken  
19 out at the bottom of Page 1 early on.

20 So do you recall from this session  
21 being given, first, an overview of the processes  
22 that each group was going through and assessing  
23 the data and then some specific findings?

24 A. They were giving overviews at their  
25 evaluations of their drafts. I don't remember

1 Q. What are they from?

2 A. Those -- those -- these five compounds.  
3 Those -- that doesn't relate to the Agricultural  
4 Health Study.

5 Q. What does it relate to?

6 A. I believe these were the preliminary  
7 evaluations of the epidemiology group.

8 Q. As to glyphosate, it says, "Limited for  
9 NHL and inadequate for multiple myeloma;" is that  
10 right?

11 A. That's right.

12 Q. Okay. Now, if you turn over to the  
13 section on group 3, animal studies, do you recall  
14 who was presenting for that?

15 A. The group -- the animal subgroup was  
16 led -- the subgroup chair was Dr. Jameson.

17 Q. Did you have interactions with the other  
18 subgroups other than sitting in on the plenary  
19 sessions?

20 A. We interacted at coffee breaks, yes.

21 Q. Okay. And I mean, other than rubbing  
22 shoulders socially, did you have substantive  
23 scientific interactions with the other subgroups?

24 MS. WAGSTAFF: Object to the form.

25 A. I was not involved in subgroup 3 or

1 specifics.

2 Q. The undergroup 2, which is epidemiology,  
3 do you recall that being headed by Aaron Blair?

4 A. Dr. Blair was the chair of the whole  
5 committee.

6 Q. Okay.

7 A. Of the whole group.

8 Q. Do you know Dr. Blair?

9 A. I had met him one other time as a -- as  
10 a member of the Ag Health Study. He was an  
11 emeritus faculty at NCI. I had met him one time  
12 before the Lyon meeting.

13 Q. Okay. And CI.

14 What is CI?

15 A. National Cancer Institute.

16 Q. NCI. Okay. Thank you.

17 So I saw on Page 1 of your notes  
18 from the March 6th plenary session, sir. And it  
19 mentions -- says group 2, epidemiology, and then  
20 Agricultural Health Study. And then there's a  
21 list of exposure assessments below for TCPBP.  
22 There's parathion, malathion, and glyphosate.

23 Are those the exposure assessments  
24 from the Agricultural Health Study?

25 A. No.

1 subgroup 2 or subgroup 1 to any significant  
2 extent.

3 BY MR. GRIFFIS:

4 Q. Okay. So you didn't have any  
5 substantive scientific interactions with members  
6 of those other subgroups as part of working group  
7 112.

8 Is that fair?

9 MS. WAGSTAFF: Object to the form.

10 A. My main responsibility was to evaluate  
11 the toxicokinetic data for the five compounds that  
12 were charged.

13 BY MR. GRIFFIS:

14 Q. Okay. So is the answer, no, you didn't  
15 have substantive scientific interaction with the  
16 other three groups?

17 MS. WAGSTAFF: Same objection.

18 A. I wouldn't call it -- we didn't have  
19 substantive talks. We had discussions. I  
20 would -- substantive. I don't know. I can't  
21 characterize. That's hard for me to characterize.  
22 BY MR. GRIFFIS:

23 Q. And I don't know if this is the thing  
24 that's getting you tangled up, but I'm talking  
25 about as part of an analysis of carcinogenicity of

1 these five substances, what you were all there  
2 for.

3 Rather than talking scientist to  
4 scientist about something of mutual interest; that  
5 wasn't what you were there for, right?

6 MS. WAGSTAFF: Object to the form.

7 A. So I did not have substantive discussion  
8 with the group 3 scientists regarding the cancer  
9 bioassay data on glyphosate. My charge was  
10 toxicokinetics.

11 BY MR. GRIFFIS:

12 Q. And did you have substantive  
13 interactions with group 1 or group 2 with regard  
14 to the carcinogenicity of glyphosate or the issues  
15 they were evaluating with regard to glyphosate?

16 A. Not that it impacted any of the  
17 evaluations.

18 Q. Okay. Do you know if Dr. Rusyn had  
19 substantive interactions with other groups,  
20 particularly with group 3?

21 MS. WAGSTAFF: Objection. Speculation.

22 How would he know what Dr. Rusyn did?

23 A. I can't recall.

24 BY MR. GRIFFIS:

25 Q. Did Dr. Rusyn talk about having such

1 A. Yeah.

2 BY MR. GRIFFIS:

3 Q. Okay. You would presume so, but you  
4 don't know?

5 A. I wasn't at the meeting.

6 Q. Yes, sir.

7 Under group 4, on the second page  
8 of your notes, sir, Exhibit 11, it says, "group  
9 4," and then you wrote, "ten key characteristics  
10 of agents that cause cancer," correct?

11 A. Sorry. You're on page -- which page?

12 Q. Second page.

13 A. The second page. Okay. Ten key  
14 characteristics of agents -- yes.

15 Q. So this would have been a -- part of a  
16 presentation by Dr. Rusyn?

17 MS. WAGSTAFF: Objection. Foundation.

18 A. Yes.

19 BY MR. GRIFFIS:

20 Q. Okay. And the ten key characteristics  
21 of agents that cause cancer this is what you  
22 alluded to earlier as the ten bins into which you  
23 were to sort and analyze the mechanism of the  
24 evidence part of your methodology, right?

25 A. Correct.

1 interactions?

2 MS. WAGSTAFF: Same objection.

3 A. I can't recall him...

4 BY MR. GRIFFIS:

5 Q. When your group met each day, did  
6 Dr. Rusyn report on what had happened the evening  
7 before during the closed coordination meetings for  
8 the co-chairs and subgroup chairs?

9 A. Perhaps in general terms, but I -- I  
10 can't remember specifics.

11 Q. Okay. Do you know if Kurt Straif was  
12 present at those coordination meetings?

13 A. I can't speak for these coordination  
14 meetings. These are the evening coordination  
15 meetings between the subgroup chairs --

16 Q. Yes.

17 A. -- and the overall chair of the meeting?

18 I can't speak because I wasn't  
19 present at those -- at those meetings.

20 Q. You didn't hear from Dr. Rusyn or anyone  
21 else about who was present or who was leading  
22 those meetings?

23 A. I presume Dr. Straif was there. But  
24 I -- again, I assume he was --

25 MS. WAGSTAFF: Objection.

1 Q. Okay. And now on the top of the third  
2 page, you again start listing group 1, group 2,  
3 group 3, group 4. And it appears that you've --  
4 you're talking about the evidence that was  
5 presented as to parathion from 1, 2, 3, and 4,  
6 correct?

7 A. Yes.

8 Q. And then malathion?

9 A. Correct.

10 Q. And then diazinon?

11 A. Diazinon. Where is diazinon?

12 Q. The top of the next page.

13 A. Top of Page 4? Okay. Diazinon, yeah.  
14 Okay.

15 Q. Okay. And then towards the bottom of  
16 that page, you started talking about glyphosate,  
17 right?

18 A. Yes.

19 Q. Okay. Now, tetrachlorvinphos, was --  
20 did you take notes on that and just not provide  
21 them to us, or not -- or what do you know?

22 A. There's something on TCBP. There's --  
23 on Page 2, there's some -- I have some notes on  
24 TCBP.

25 Q. But not broken down by the four groups

1 like for the other substances, right?

2 A. No.

3 Q. Okay. Let's talk about the glyphosate  
4 notes on Page 4. Group 1. The report from group  
5 1 share on glyphosate was -- that you wrote down  
6 was "detectable in water and food," correct?

7 A. Yes.

8 Q. Okay. For group 2, the report was  
9 glyphosate negative non-Hodgkin's lymphoma. Case  
10 control, glyphosate, arrow, non-Hodgkin's  
11 lymphoma, right?

12 MS. WAGSTAFF: Object to the form.

13 A. This -- this is what I wrote.

14 BY MR. GRIFFIS:

15 Q. And what's your recollection of what  
16 that meant?

17 A. I don't recall.

18 Q. Okay. And you also wrote AHS negative  
19 data, correct?

20 A. I did.

21 Q. And it is your understanding that AHS  
22 data was negative with regard to association with  
23 glyphosate?

24 MS. WAGSTAFF: Object to the form.

25 A. That is correct.

1 BY MR. GRIFFIS:

2 Q. And that is your understanding?

3 A. The AHS study. The AHS study, that was  
4 a negative result.

5 Q. Talking -- when you say the AHS study a  
6 negative result regarding glyphosate, are you  
7 talking about the DeRoos 2005 publication?

8 A. No. No. No. No.

9 Q. Tell me what you --

10 A. At AHS, there was a negative  
11 association, but there was a case control study  
12 that showed a positive association.

13 Q. Which study is that, if you recall?

14 A. I don't recall the citation.

15 Q. Okay.

16 A. But it's in the monograph.

17 Q. Yes, sir. Group 3. You wrote as your  
18 report from -- you wrote down from the group 3  
19 report, "glyphosate limited to inadequate,"  
20 correct?

21 A. Yes.

22 Q. Okay. So was it the finding of the  
23 group 3 group at that time that the evidence of  
24 carcinogenicity of glyphosate was limited to  
25 inadequate in animal studies?

1 MS. WAGSTAFF: Object to the form.

2 A. So I don't recall the specific  
3 discussion at this stage. This was early  
4 preliminary discussions. The meeting was only  
5 halfway through. So this was just a preliminary  
6 note in a plenary session.

7 BY MR. GRIFFIS:

8 Q. Yes, sir. Halfway through the group  
9 3 -- group 3 had found limited to inadequate  
10 evidence of carcinogenicity of glyphosate,  
11 correct?

12 MS. WAGSTAFF: Object to form. There's  
13 no foundation that that's what group 3  
14 actually found at that point.

15 A. I wasn't on group 3, so I wasn't privy  
16 to their discussions.

17 BY MR. GRIFFIS:

18 Q. That was reported to everybody at the  
19 plenary session; is that right?

20 A. I don't remember --

21 MS. WAGSTAFF: Objection.

22 A. -- the context, but this is what I  
23 wrote.

24 BY MR. GRIFFIS:

25 Q. Well, you participated in this, and you

1 attended multiple plenary sessions where you got  
2 progress reports.

3 Your understanding, halfway  
4 through, was that group 3 was trending towards  
5 limited to inadequate, as far as the animal  
6 studies point; is that correct?

7 MS. WAGSTAFF: Object to form and  
8 foundation.

9 A. They were only halfway through. They  
10 had not completed their evaluation. We hadn't  
11 even gone through the monograph as a whole -- as  
12 a -- in plenary session line by line. So I don't  
13 I -- I don't know which way they were trending at  
14 this point.

15 BY MR. GRIFFIS:

16 Q. What you wrote down from their report  
17 was "limited to inadequate," right?

18 A. That's what I have written down.

19 Q. And that would have been them, not you,  
20 because were not involved with group 3, as you  
21 just said?

22 A. My main focus was on the toxicokinetics  
23 in group 4.

24 Q. You didn't get involved with any  
25 evaluation of the animal studies.

1 Is that fair or not?  
 2 MS. WAGSTAFF: Objection to the word  
 3 "involved."  
 4 A. I was not in subgroup 3 -- in their  
 5 subgroup 3 discussions regarding the  
 6 carcinogenicity of glyphosate in animals.  
 7 BY MR. GRIFFIS:  
 8 Q. Well, was the carcinogenicity of  
 9 glyphosate in whole animals discussed in group 4?  
 10 A. I don't recall specifically. I don't  
 11 recall whether the animal cancer bioassay data was  
 12 discussed explicitly in our subgroup.  
 13 Q. Was human evidence -- by humans, I mean  
 14 whole humans -- discussed in your group?  
 15 A. It wasn't in our subgroup.  
 16 MS. WAGSTAFF: Object to the form.  
 17 BY MR. GRIFFIS:  
 18 Q. I'm sorry. I didn't hear your answer.  
 19 A. We were focused on mechanisms. I was --  
 20 as a subgroup, we were focused on mechanisms. I  
 21 was focused on toxicokinetics.  
 22 Q. For group 4 -- I'm going back to Exhibit  
 23 11 here, sir. For group 4, you just wrote  
 24 glyphosate.  
 25 Do you recall what was being

1 reported as to group 4's findings at that point?  
 2 A. I don't recall.  
 3 Q. Okay. And can you tell the jury, since  
 4 you were involved in all of these subgroup  
 5 sessions for group 4, how group 4's thinking  
 6 evolved over the course of work group 112?  
 7 MS. WAGSTAFF: Object to the form.  
 8 A. On which compound? On --  
 9 BY MR. GRIFFIS:  
 10 Q. Glyphosate.  
 11 A. Glyphosate?  
 12 Q. Yes, sir.  
 13 A. Okay. So the group was leaning towards  
 14 looking at the data on the genotoxicity and  
 15 oxidative stress of glyphosate and in evaluating  
 16 that particular data. Because we concluded at the  
 17 end -- by the end, we had concluded that the  
 18 evidence was strong for those two key  
 19 characteristics.  
 20 Q. Yes, sir. Over the -- over time, how  
 21 did you evolve to the point of concluding there  
 22 was strong as to those two characteristics?  
 23 A. I wouldn't use the word "evolve." I  
 24 think the evidence was presented early on in the  
 25 meeting that it was strong. I don't think there

1 was an evolution in that thinking.  
 2 Q. Okay. Were you always -- was your group  
 3 always leaning towards the 2-A finding?  
 4 MS. WAGSTAFF: Object to the form.  
 5 A. Say that again one more time.  
 6 BY MR. GRIFFIS:  
 7 Q. Yes. The ultimate evaluation of IARC  
 8 was to classify glyphosate as 2-A, correct?  
 9 A. That was the ultimate finding, yeah.  
 10 Q. And was that always group 4's view, or  
 11 did that change over time?  
 12 MS. WAGSTAFF: Object to the form.  
 13 A. That was not always group 4's view, no.  
 14 BY MR. GRIFFIS:  
 15 Q. Tell me how --  
 16 A. Because we --  
 17 Q. -- group 4 changed over time.  
 18 A. Well, we don't make those evaluations in  
 19 subgroup, like group 2-A or 2-B. Those are not  
 20 made within the subgroup. Those are made as a  
 21 whole, as a -- within plenary. Taking into  
 22 account the human data -- the human epi data, the  
 23 animal cancer bioassay data, and the mechanistic  
 24 data. So evaluations are not made within  
 25 individual subgroups.

1 Q. So your -- please correct me if I'm  
 2 wrong.  
 3 But your task, as part of subgroup  
 4 4, the subgroup 4 task was to make an evaluation  
 5 within the ten key cancer characteristics -- the  
 6 ten bins that we talked about earlier as to weak,  
 7 limited, or strong?  
 8 A. Correct.  
 9 Q. Okay. And then that would go to the  
 10 group as a whole to see what to do with that  
 11 information.  
 12 Is that fair?  
 13 A. We would give descriptors to the  
 14 evidence regarding these to ten key  
 15 characteristics and summarize that, and it would  
 16 be presented to the preliminary group.  
 17 Q. And your conclusion -- I mean the  
 18 conclusion you would present would be weak,  
 19 limited, or strong as to each of those bins with  
 20 rationale, of course, correct?  
 21 A. Which is in the monograph.  
 22 Q. Yes, sir. But am I correct that would  
 23 be the evaluation?  
 24 A. Right. And that was -- that would be in  
 25 the -- very clearly stated in the monograph, as it

1 was.

2 Q. And where is it written, if anywhere,  
3 how IARC evaluates the significance of a finding  
4 of strong for genotox and strong for oxidative  
5 stress?

6 A. Where is it -- explain what you mean.

7 Q. Yes, sir. Do you have some guidance for  
8 whether different substances are going to -- if  
9 evaluated in terms of the ten key characteristics  
10 of cancer, are different profiles, when divided  
11 among the key characteristics of cancer, right?

12 A. Yes.

13 Q. There are certainly substances for,  
14 example, for oxidated stress that show oxidative  
15 stress that aren't in fact carcinogens, right?

16 A. There are examples.

17 Q. And there are substances that are  
18 carcinogens that don't show oxidative stress?

19 A. But we're not talking about glyphosate  
20 here?

21 Q. No. No.

22 A. You are -- maybe this is hypotheticals  
23 now.

24 Q. It's true, though, correct?

25 MS. WAGSTAFF: Object as a hypothetical

1 Suggestion that no industry studies that were  
2 conducted in GLP labs were part of the  
3 published literature?

4 A. We had access to the publicly available  
5 literature. It is my understanding that there  
6 were some industry studies that EPA had that we  
7 could get access to.

8 BY MR. GRIFFIS:

9 Q. Did you get access to them?

10 A. This for -- talking about the cancer  
11 bioassay data, they had access to EPA data.

12 Q. Do you know of any -- I'm going to use  
13 the term "registration study."

14 Do you know what that means?

15 A. For EPA. For data provided by the  
16 company to EPA for registration purposes.

17 Q. Did you look at any registration studies  
18 in reaching your evaluation about the mechanism?

19 A. I don't recall.

20 MS. WAGSTAFF: Object to the form.

21 A. There's -- I don't recall. The person  
22 who was looking at the genotox data may have, but  
23 there was data that was unavailable to the working  
24 group that Monsanto had access to.

25

1 and agree with the witness.

2 MR. WHITE: That's true. I've  
3 instructed my client not to answer any  
4 hypotheticals.

5 BY MR. GRIFFIS:

6 Q. Sir, when you were working with group  
7 112, did you have any set of criteria by which you  
8 were to evaluate whether a substance was capable  
9 of causing human cancers based on the finding of  
10 strong or oxidated stress and strong for genotox?

11 A. We were instructed to evaluate the  
12 publicly available literature as a whole to  
13 determine whether there was strong evidence,  
14 moderate evidence, or weak evidence that  
15 glyphosate may cause oxidated stress or glyphosate  
16 may induce genotoxicity.

17 So we were instructed to look at  
18 the whole -- to the whole database and to draw  
19 conclusions whether the database was strong,  
20 moderate, or weak.

21 Q. When you say the whole database, you are  
22 referring to published literature and not to any  
23 industry studies that were conducted in GLP labs,  
24 correct?

25 MS. WAGSTAFF: Object to the form.

1 BY MR. GRIFFIS:

2 Q. Do you know that there were publications  
3 presenting a great deal of that data, that Hyer &  
4 Kirkland published an article that was not  
5 reviewed by IARC?

6 A. And the reason was the committee  
7 couldn't evaluate the methodology that those  
8 studies used. They just presented a summary of  
9 findings without publishing the methodology  
10 involved. So independent scientists would have a  
11 very difficult time of determining the veracity of  
12 that data.

13 Q. And do you know what the methodological  
14 gaps that were listed in -- I mean in the IARC  
15 monograph, it says, we didn't look at the Hyer &  
16 Kirkland data because we couldn't evaluate A, B,  
17 C, D about the methodology.

18 Could you evaluate A, B, C, and D  
19 from all of the studies you did review from the  
20 published literature methodology fully set forth  
21 in those study?

22 A. For the -- I can only speak for the  
23 toxicokinetic data because that is what I was  
24 responsible for.

25 Q. Okay. You can't say as the genotox or



1 oxidated stress?

2 MS. WAGSTAFF: Objection asked and  
3 answered. He has given his response.

4 A. For the genotox and oxidated stress  
5 because I did not write those drafts. So I didn't  
6 look at every single one of those papers.

7 Q. Yes, sir.

8 A. I don't know -- I assume the -- for a  
9 paper to be brought forward and, especially if it  
10 was deemed to be a strong paper in terms of  
11 providing evidence for a mechanism, the -- you  
12 would need to see the methodology that was  
13 utilized in the statistical analysis and so forth.

14 So I'm -- I can't speak to that. I  
15 can't speak directly to that because I was not  
16 involved in the draft of that document, but this  
17 is publicly available literature. And it would be  
18 important for the reviewers for the -- for the  
19 committee to have that methodological information  
20 to evaluate the paper.

21 Q. Do you know who made the decision not to  
22 use the Hyer & Kirkland information?

23 A. I don't know who specifically was  
24 responsible for doing that.

25 Q. Who did you learn -- from whom did you

1 learn that that decision had been made?

2 A. I believe that it was -- it came up in  
3 plenary. And I don't remember if it was  
4 Dr. Straif or Dr. Guyton who determined that.

5 Q. Your belief is that it was either  
6 Dr. Straif or Dr. Guyton who rejected the Hyer &  
7 Kirkland data?

8 MS. WAGSTAFF: Object to the form.

9 A. Yeah. The specialist in the subgroup  
10 who worked on the genotoxicity would have been  
11 involved in that decision, as well.

12 BY MR. GRIFFIS:

13 Q. Okay. And do you know that, or is that  
14 just speculation?

15 A. I don't know for sure, but that's -- I  
16 assume the person who had -- who was in charge of  
17 that area would have been involved in discussions  
18 regarding that review paper, the cure paper.

19 Q. Who was that?

20 A. Who was the genotox specialist?

21 Q. Yes, sir.

22 A. On our subgroup?

23 Q. Yes, sir?

24 A. Dr. LeCurieux.

25 MS. WAGSTAFF: I am going to object to

1 this line of questioning. He's -- the  
2 deponent has said he doesn't know the answer.  
3 And he's also used the word that he's  
4 assuming. So I'm going to object for  
5 speculation.

6 MR. WHITE: And I'd like to add that you  
7 don't have to make any assumptions.

8 MR. GRIFFIS: What time is it?

9 MR. WHITE: 11:41.

10 MR. GRIFFIS: So we've been going an  
11 hour.

12 VIDEOGRAPHER: 44 minutes.

13 (Exhibit No. 13-12 marked for  
14 identification.)

15 BY MR. GRIFFIS:

16 Q. Okay. Dr. Ross, I handed you a document  
17 that you provided to us. It is an e-mail exchange  
18 between you and Dr. Michael Alavanja.

19 Is that pronounced correctly?

20 A. Yes.

21 Q. Okay. And would you please tell us who  
22 Dr. Alavanja is?

23 A. He was the principal investigator of the  
24 Agricultural Health Study at the National Cancer  
25 Institute.

1 Q. In this thread, he announced that he was  
2 retiring from NCI, correct?

3 A. Yes.

4 Q. Okay. You sent him your best wishes and  
5 then talked a little bit about AHS and the IARC  
6 meeting, correct?

7 A. Right.

8 Q. Okay. And do you know him through your  
9 role on the AHS, the advisory committee?

10 A. Correct.

11 Q. Is that the only way you know him, or  
12 did you have a prior relationship, as well?

13 A. Not before that.

14 Q. Okay. And you told him indeed the AHS  
15 worked out a prominent role at the IARC meeting I  
16 attended, right?

17 A. Yes.

18 Q. What did you mean by that?

19 A. Many of their studies were being  
20 evaluated at the meeting.

21 Q. And was it your understanding, from  
22 attending the plenary sessions and hearing the  
23 epidemiology group and exposure group talk about  
24 the Agricultural Health Study data, that it was  
25 important to their evaluation?

1 MS. WAGSTAFF: Objection. Dr. Ross  
2 stated he didn't -- wasn't involved in those  
3 subgroups. And, also, the Agricultural  
4 Health study involves other chemical besides  
5 glyphosate, which is outside the scope.  
6 BY MR. GRIFFIS:  
7 Q. Go ahead, sir.  
8 A. The AHS studies was not just on  
9 glyphosate. There were other chemicals being  
10 evaluated, some of which were the organophosphates  
11 at the volume 112 meeting. So there was -- this  
12 is what I mean by AHS had a prominent role at the  
13 meeting.  
14 Q. When you said a prominent role, you  
15 weren't talking about glyphosate? You were  
16 talking about the other substances?  
17 MS. WAGSTAFF: Objection. Misstates the  
18 testimony.  
19 A. I was talking about in general.  
20 BY MR. GRIFFIS:  
21 Q. Okay.  
22 A. The AHS work in general.  
23 Q. Did it have a prominent role with regard  
24 to glyphosate?  
25 A. Well, it -- its data was evaluated in

1 the glyphosate -- in the evaluation of glyphosate.  
2 That study was evaluated.  
3 Q. The whole group met to put all of this  
4 together, put the whole evaluation together to  
5 talk about all of the data, right?  
6 A. The whole -- the whole group, yes.  
7 Sure.  
8 Q. Yes. And was it your understanding from  
9 those meetings the AHS data was important to the  
10 evaluations of the glyphosate by the other groups?  
11 MS. WAGSTAFF: Objection.  
12 A. I wasn't in group 2.  
13 BY MR. GRIFFIS:  
14 Q. Talking about the meetings.  
15 Everybody had to go together?  
16 A. I can't recall that.  
17 Q. You were at glyphosate issue -- back to  
18 Exhibit 12 and your e-mail to Dr. Alavanja.  
19 "The glyphosate issue kind of blew  
20 up after we had finished and left," correct? What  
21 did you mean by it kind of blew up?  
22 A. There was a lot of press.  
23 Q. Then you said, "Although, it was the  
24 rodent cancer bioassays, in the case of glyphosate  
25 that was really the most controversial issue for

1 glyphosate," right?  
2 A. That's what I've written.  
3 Q. What did you mean?  
4 A. There was debate going on within the  
5 cancer bioassay subgroup regarding whether it was  
6 deemed to be sufficient or limited. So there was  
7 debate -- scientific debate at the meeting --  
8 Q. You --  
9 A. -- regarding those -- that issue.  
10 Q. You considered that to be the most  
11 controversial debate that was going on that you  
12 were aware of with regard to glyphosate at  
13 IARC 112?  
14 A. Yes.  
15 Q. Okay. And it was between limited or  
16 sufficient with regard to cancer bioassays for  
17 animals?  
18 A. Yeah. I -- yes. It was -- it is that  
19 issue.  
20 Q. And did you know who was advocating for  
21 limited and who was advocating for sufficient?  
22 A. I don't remember. I can't recall.  
23 Q. Okay. Do you recall anyone who was  
24 advocating for limited or sufficient?  
25 A. No.

1 Q. Okay.  
2 A. I wasn't privy to their conversations.  
3 Q. Okay. Now, as a member of the AHS  
4 advisory group, are you made aware of the content  
5 of the data that hasn't been published?  
6 MS. WAGSTAFF: Objection.  
7 BY MR. GRIFFIS:  
8 Q. That data they continue to collect  
9 hasn't been published?  
10 MS. WAGSTAFF: His role as an AHS  
11 advisory member is outside of the requested  
12 discovery of the exploration of the mechanism  
13 subgroup's conclusion about glyphosate.  
14 A. I don't receive any unpublished data  
15 from AHS.  
16 BY MR. GRIFFIS:  
17 Q. Do you receive -- you were giving them  
18 advice about things, right? Did they ever ask you  
19 whether you think something should be published?  
20 A. No.  
21 Q. What sorts of things did they ask for  
22 advice about?  
23 A. We -- I have only met with them one  
24 time. They would ask studies -- they would ask  
25 opinion -- you know, ask us our opinion. And in

1 my case, they would ask my opinion about issues of  
2 measuring pesticide, residues, and issues of  
3 mechanistic mechanisms by which chemicals might  
4 cause cancer, mutations in cancer.

5 Q. Did you have an understanding, from your  
6 review of the preamble, your attendance at the  
7 evaluation criteria meeting, all the training you  
8 got on IARC methodology, that if the epidemiology  
9 evidence, evidence of group 2 is below limited,  
10 then the substance in question gets a group 3  
11 classification?

12 MS. WAGSTAFF: Objection. Calls for  
13 speculation. Foundation.

14 BY MR. GRIFFIS:

15 Q. Do you recall that?

16 A. So if -- yeah -- wait a minute. The  
17 human epi, if it was deemed to be inadequate, and  
18 the animal cancer bioassay data -- well, it's --  
19 we are speculating now because that is not what  
20 happened.

21 Q. Well, let's take a look at the preamble,  
22 Page 23.

23 You reviewed and understood the  
24 preamble, correct?

25 MS. WAGSTAFF: I'm actually going to

1 object also, this is causing for a  
2 hypothetical that is completely unrelated to  
3 the mechanism subgroup conclusion about  
4 glyphosate. You're actually proposing a  
5 hypothetical on what happens if the  
6 epidemiology has a different classifications  
7 as to what it ultimately determined.

8 MR. GRIFFIS: Well, I will link it up.  
9 Don't worry.

10 BY MR. GRIFFIS:

11 Q. Page 23.

12 A. Uh-huh (affirmative response).

13 Q. You see, the criteria for an evaluation  
14 of group 3, "This category is used most commonly  
15 for agents for which the evidence of  
16 carcinogenicity is inadequate in humans and  
17 inadequate or limited in experimental animals,"  
18 right?

19 A. Correct.

20 Q. Okay.

21 MS. WAGSTAFF: I'm going to object to  
22 you're saying that that is a "shall make"  
23 determination.

24 MR. GRIFFIS: Let me finish, please.  
25

1 BY MR. GRIFFIS:

2 Q. "And, exceptionally, agents for which  
3 the evidence of carcinogenicity is inadequate in  
4 humans but sufficient in experimental animals may  
5 be placed in this category when there's strong  
6 evidence that the mechanism of carcinogenicity in  
7 experimental animals does not operate in humans,"  
8 right?

9 A. That's what the preamble says.

10 Q. In group 4, "This category is used for  
11 agents for which there is evidence suggesting lack  
12 of carcinogenicity in humans and in experimental  
13 animals," right?

14 A. Yes.

15 MS. WAGSTAFF: Continue to object on the  
16 scope, as it seems as you're trying to elicit  
17 expert testimony.

18 BY MR. GRIFFIS:

19 Q. Sir, did you know that Dr. Aaron Blair  
20 was deposed in this litigation?

21 A. Yes.

22 Q. Did you talk to Dr. Blair about being  
23 deposed?

24 A. No.

25 Q. Do you know about that fact that he was

1 deposed?

2 A. I found it in the court records.

3 Q. Did a little research when you heard you  
4 were going to be deposed?

5 A. We are scientists. It is publicly  
6 available.

7 Q. Did you know Dr. Blair disclosed that  
8 the AHS has seven more years of follow-up data  
9 than that that was presented to IARC and that that  
10 data, which involves many more cases than has been  
11 previously published in DeRoos in 2005, the  
12 article that was considered by IARC, is strongly  
13 negative for non-Hodgkin's lymphoma and that if  
14 that data had been put into the meta analysis and  
15 was done by the epidemiology group, the relative  
16 risk would have been below 1.0. About 0.9.

17 Did you know that?

18 MS. WAGSTAFF: Objection. Misstates  
19 the -- Dr. Blair's testimony and is  
20 completely irrelevant. And you're doing a  
21 hypothetical upon hypothetical.

22 MR. WHITE: You can answer as to whether  
23 or not you were aware that that was...

24 A. No. I wasn't aware of that.  
25

1 BY MR. GRIFFIS:

2 Q. Okay. Do you know what relevance the  
3 findings of the mechanism group would have in the  
4 presence of negative human epidemiology in the  
5 absence of a limited association?

6 MS. WAGSTAFF: Objection. Calls for a  
7 hypothetical. If it was presented in this  
8 particular monograph 112, then that is  
9 appropriate, but I think you're exploring  
10 hypotheticals that are inappropriate to the  
11 scope.

12 BY MR. GRIFFIS:

13 Q. Go ahead, sir.

14 MR. WHITE: You can answer as far as you  
15 have factual knowledge of a yes or no, but  
16 you do not need to go into any details of a  
17 hypothetical.

18 A. The mechanistic subgroup can upgrade or  
19 downgrade if -- if it needs to. So I -- since  
20 that wasn't the issue in this case, then, I don't  
21 know what else I can add.

22 BY MR. GRIFFIS:

23 Q. Well, this is a question about the --  
24 your understanding of the methodology applied by  
25 IARC in doing its classifications and how

1 agent may be classified in this category, being  
2 2-A, when there is inadequate evidence of  
3 carcinogenicity in humans and sufficient evidence  
4 of carcinogenicity in experimental animals and  
5 strong evidence that carcinogenesis was mediated  
6 by a mechanism that also operates in humans."

7 Q. What strong evidence was presented in  
8 the IARC monograph working group 112 that  
9 carcinogenesis observed in experimental animals is  
10 mediated by a mechanism that also operates in  
11 humans?

12 MS. WAGSTAFF: Objection to the  
13 monograph. It speaks for itself.

14 A. The mechanistic evidence that was deemed  
15 strong was the genotoxicity and the oxidative  
16 stress classification. You know, just those  
17 characteristics.

18 BY MR. GRIFFIS:

19 Q. So just the fact of finding genotoxicity  
20 and oxidative stress suffices to show this is a  
21 mechanism that operates in humans.

22 Do you have to be more specific  
23 than that?

24 A. Because the findings, the data, were  
25 obtained in exposed humans in cultured cells -- in

1 mechanism fits into that. What --

2 A. But then I have to go into a  
3 hypothetical.

4 Q. What is the role of mechanism in the  
5 absence -- in the presence of negative human  
6 epidemiology? Negative, not limited.

7 MS. WAGSTAFF: Objection. Hypothetical.

8 THE WITNESS: So should I answer this  
9 hypothetical?

10 MR. WHITE: You can answer it to the  
11 extent that you -- that you know under this  
12 evaluation, under the way that you were  
13 instructed.

14 A. Right. So if it was inadequate in  
15 humans, sufficient in animal, and we had strong  
16 evidence in mechanism -- mechanistic evidence,  
17 then we could call for an upgrade to upgrade the  
18 classification.

19 BY MR. GRIFFIS:

20 Q. To 2-A?

21 A. If it was inadequate -- yes. Look at --  
22 you can look in the preamble. Okay.

23 Q. Show where it shows the inadequate  
24 evidence in human --

25 A. Page 22, line 35. "In some cases, an

1 vitro human cells -- cultured in vitro, exposed to  
2 glyphosate. And in some animal models, in vivo  
3 there was evidence of carcinogenicity -- or excuse  
4 me. Take that back -- of genotoxicity.

5 The important thing, in terms of  
6 operable in humans, is the fact that exposed  
7 humans showed evidence of genotoxicity, and  
8 cultured cells of human origin showed evidence of  
9 genotoxicity. Those were -- those then showed  
10 that this mechanism may operate in humans.

11 Q. You would agree with me that  
12 genotoxicity does not mean carcinogenicity, right?

13 MS. WAGSTAFF: Object to the form.

14 A. As -- not all genotoxins lead to cancer.

15 BY MR. GRIFFIS:

16 Q. And that is because there are multiple  
17 additional steps that have to take place before  
18 cancer is produced, right?

19 A. Yes.

20 Q. Genotoxicity would have to lead to a  
21 permanent mutation in order to cause cancer,  
22 correct?

23 MR. WHITE: I'm going to object. At  
24 this point, we're moving beyond the scope of  
25 IARC, and we're asking for expert testimony.

1 You don't have to answer that.  
 2 BY MR. GRIFFIS:  
 3 Q. Sir, in order to reach a conclusion that  
 4 the genotoxic mechanisms that you identified as  
 5 part of working group 112 can operate in humans,  
 6 there would need to also be evidence that those  
 7 genotoxic mechanisms would lead to permanent  
 8 mutations, not just temporary, transient ones,  
 9 correct?  
 10 A. The evidence would be stronger if it was  
 11 permanent mutations.  
 12 Q. If there was evidence -- if, in fact,  
 13 the evidence was not consistent with permanent  
 14 mutations, than the genotoxic mechanism that you  
 15 observed couldn't produce cancer in that way,  
 16 correct?  
 17 MS. WAGSTAFF: Objection. Calls for a  
 18 hypothetical.  
 19 A. I don't know. I can't say anything to  
 20 that. I don't know.  
 21 BY MR. GRIFFIS:  
 22 Q. That wasn't part of your evaluation?  
 23 A. Well, if it leads to DNA damage, this  
 24 could lead to genomic instability and cancer. So  
 25 just to rule out DNA damage is not causing -- DNA

1 MS. WAGSTAFF: Just for completeness of  
 2 record, we had the phone line open all day,  
 3 and we don't believe anyone has called in;  
 4 and no one has made a peep.  
 5 BY MR. GRIFFIS:  
 6 Q. Dr. Ross, I hand you Exhibit 13. And  
 7 that is an e-mail from Dr. Rusyn to you at Martin  
 8 and Frank LeCurieux -- did I pronounce that right?  
 9 A. Correct.  
 10 Q. Dated February 27th of 2015, correct?  
 11 A. I am just looking for the actual e-mail  
 12 here. Let's see. Which page is it? Is it --  
 13 from -- that's from Kate Guyton and Ivan.  
 14 MS. WAGSTAFF: I'm just going to put an  
 15 objection on the record that there is a  
 16 document that was produced or provided by  
 17 Dr. Ross. It is a more complete cascade of  
 18 this conversation. And the fact that it's  
 19 not to all of those folks. It's just to  
 20 Dr. Guyton.  
 21 BY MR. GRIFFIS:  
 22 Q. You see the top of this document?  
 23 A. I got cc'd on it.  
 24 Q. Okay. And Dr. Rusyn responded to  
 25 Kathryn Guyton and cc'd you and suggested that you

1 damage can lead to mutations.  
 2 Q. And DNA damage might not lead to  
 3 mutations, as well?  
 4 A. It depends on the context.  
 5 Q. There are all sorts of analyses and  
 6 assays that are done to look for actual mutations  
 7 such as AIMS test, right?  
 8 A. There are.  
 9 Q. Okay. And that evidence is negative for  
 10 glyphosate?  
 11 A. It is in the monograph. Whatever the  
 12 AIMS assay showed, it's in the monograph, whether  
 13 it was positive or negative.  
 14 Q. You don't know?  
 15 A. I think for the AIMS assay, the data for  
 16 glyphosate is negative.  
 17 Q. Yes, sir.  
 18 MR. GRIFFIS: We'll break now then for  
 19 lunch?  
 20 VIDEOGRAPHER: Off record at 11:59.  
 21 (A lunch recess was taken.)  
 22 VIDEOGRAPHER: Back on record. This is  
 23 DVD three at 1:05.  
 24 (Exhibit No. 13-13 marked for  
 25 identification.)

1 take a look at some of the subsections that were  
 2 attached to that document, right?  
 3 A. Yes.  
 4 Q. And the document in question was the  
 5 Greim published article; is that correct? Greim  
 6 2015?  
 7 A. I am not familiar with that article. I  
 8 think -- is this the article with the -- there  
 9 were several studies summarized?  
 10 Q. Yes, sir. A summary of multiple animal  
 11 studies. Greim, et al., 2015.  
 12 A. Okay.  
 13 Q. And Dr. Rusyn forwarded that to you with  
 14 the suggestion that you take a look at the small  
 15 vignettes that are relevant to your subsection on  
 16 mechanistic data; is that correct?  
 17 A. Yes.  
 18 Q. Dr. Rusyn said, "With regard to the  
 19 Greim article, this is an interesting preliminal  
 20 piece," correct?  
 21 A. Yes.  
 22 Q. And did you view the Greim article as a  
 23 preliminal piece?  
 24 A. I didn't have an opinion on it.  
 25 Q. He said -- Dr. Rusyn said, "It does not

<p style="text-align: right;">Page 110</p> <p>1 surprise me that, when under pressure, the 2 industry can muster a relevant publication." He 3 put relevant in quotes. "It goes from submission 4 to acceptance in as little as seven weeks," 5 correct? 6 A. That's what is written there. 7 Q. Okay. And what did you understand him 8 to mean by the industry being under pressure? 9 MS. WAGSTAFF: Objection. Calls for 10 speculation. 11 A. I didn't know what he -- I didn't know 12 what he meant by that. 13 BY MR. GRIFFIS: 14 Q. Now, you worked with Dr. Rusyn closely 15 during working group 112 and got to know him and 16 his style of working, right? 17 A. I got to know Dr. Rusyn. 18 Q. Okay. And is his sarcastic tone towards 19 industry consistent with your experience working 20 with him on working group 112? 21 MS. WAGSTAFF: Object to the form. 22 There's nowhere on here that it says it's 23 sarcastic. 24 A. I didn't find him sarcastic. I found 25 him objective.</p>	<p style="text-align: right;">Page 112</p> <p>1 than they were during working group 112? 2 A. No. 3 Q. Okay. He said at the end of his e-mail, 4 "I am confident that the IARC monograph will be 5 much more comprehensive and balanced," correct? 6 A. Yes. That's written here. 7 Q. And the IARC monograph did not include 8 the Greim article or the studies discussed 9 therein, correct? 10 A. Right. 11 Q. Did not discuss the Hyer &amp; Kirkland 12 article or the studies discussed therein, correct? 13 A. Correct. 14 Q. Okay. Now, you're aware, because of the 15 correspondence that you were a signatory to 16 following IARC, that there are a number of 17 regulatory agencies that have also done reviews of 18 glyphosate both before and after the IARC review; 19 is that right? 20 MS. WAGSTAFF: Objection. This is 21 completely beyond the scope. Anything that 22 happened after IARC is not allowed by the 23 scope of the order allowed by Judge Charbriro 24 and MDL. 25 A. So -- okay. Is your question did I know</p>
<p style="text-align: right;">Page 111</p> <p>1 BY MR. GRIFFIS: 2 Q. Did you find this paragraph -- "This is 3 an interesting preliminal piece. It does not 4 surprise me that, when under pressure, the 5 industry can muster a 'relevant' publication. It 6 goes from submission to acceptance in as little as 7 seven weeks. Kudos to CR-2, a known helper to 8 'informative' publications from the industry 9 stakeholders for such expediency and relevancy." 10 You don't find that to be 11 sarcastic? 12 MS. WAGSTAFF: Objection. If you want 13 to know if it's sarcastic, you need to ask 14 the person who wrote it and not someone who 15 is merely cc'd on the document. This is 16 beyond the scope of -- of the subgroup's 17 determination on glyphosate. 18 A. I don't have an opinion. 19 BY MR. GRIFFIS: 20 Q. Did Dr. Rusyn express any views about 21 industry to you during working group 112? 22 A. No. 23 Q. Did he express any views to you about 24 whether he felt that the chemicals that you were 25 investigating should be more strongly regulated</p>	<p style="text-align: right;">Page 113</p> <p>1 of anything before the meeting? 2 BY MR. GRIFFIS: 3 Q. No, sir. Question is, because you were 4 a signatory to some letters, following IARC, you 5 are aware that regulatory agencies have also done 6 reviews of glyphosate, both before and after 7 working group 112 met? 8 MS. WAGSTAFF: Objection. Again, this 9 is completely beyond the scope of what is 10 allowed by this deposition. The 11 regulatories -- decisions have nothing to do 12 with the mechanism subgroup's conclusion of 13 glyphosate, especially when you're talking 14 about after monograph 112. 15 A. So I was not aware of EFSA doing their 16 regulatory review until after it came to light -- 17 BY MR. GRIFFIS: 18 Q. Yes, sir. 19 A. -- that I understood what was going on 20 there. So I am aware that regulatory agencies 21 have been reviewing glyphosate, yes. 22 Q. And are you -- and you're aware, because 23 it's part of the substance of the letters that you 24 signed, that those reviews involved a review both 25 of the published literature and the unpublished,</p>

1 right?

2 MS. WAGSTAFF: Again, this is completely  
3 beyond the scope of what's allowed, and this  
4 is an abuse of the order that Judge Charbri  
5 entered allowing exploration of the mechanism  
6 subgroup's conclusion about glyphosate.  
7 You're asking about letters that happened  
8 after monograph 112, and you're asking about  
9 regulatory agencies which haven't even been  
10 allowed in this litigation.

11 MR. WHITE: Yeah. At this point, I'm  
12 going to instruct my client that he does not  
13 have to answer these. It's not -- if it's  
14 not brought back to the actual monogram.

15 MR. GRIFFIS: I'm bringing it back.

16 MS. WAGSTAFF: I think he was instructed  
17 that he didn't have to answer it.

18 BY MR. GRIFFIS:

19 Q. Do you know that Dr. Jameson testified  
20 today that he wasn't shown the Greim article --  
21 Dr. Jameson?

22 MS. WAGSTAFF: Objection. We don't have  
23 any authority or any foundation that that's  
24 true. And we have no idea what the testimony  
25 question was asked or what was said. That's

1 is some comments by Chris Portier on a response by  
2 EFSA to a letter sent by Portier and others.

3 And 15 I marked because it's the --  
4 it has numbered paragraphs also supplied by you.  
5 Numbered paragraphs that link up to the numbered  
6 paragraphs in Mr. Portier's --

7 MS. WAGSTAFF: I'm again going to  
8 object. The request for this deposition was  
9 to explore the mechanism subgroup's  
10 conclusions about glyphosate. And that is  
11 what the Court allowed as a fact deposition.  
12 And now you are asking about something that  
13 happened in January 13th, 2016, which is a  
14 year and a half after the conclusion came  
15 out. And I think it's a completely  
16 inappropriate line of questioning.

17 MR. GRIFFIS: It links directly to the  
18 procedures used by IARC at the group.

19 BY MR. GRIFFIS:

20 Q. I just want to ask you about one comment  
21 by Chris Portier, sir.

22 This is a document that you  
23 recognize that came from your production, right?

24 MS. WAGSTAFF: You're talking about  
25 Exhibit 14?

1 pure speculation. How would he know that?

2 MR. WHITE: You don't have to answer  
3 that.

4 BY MR. GRIFFIS:

5 Q. Do you know if Dr. Jameson was shown  
6 Greim?

7 MS. WAGSTAFF: Objection. Speculation.

8 MR. GRIFFIS: Okay. I'm going to mark  
9 another document.

10 (Exhibit No. 13-14 marked for  
11 identification.)

12 (Exhibit No. 13-15 marked for  
13 identification.)

14 MS. WAGSTAFF: Did you highlight these,  
15 Kirby, or is it --

16 MR. GRIFFIS: This is how we have it.

17 MS. WAGSTAFF: Okay. Wait.

18 MR. WHITE: We have two -- 14 and 15?

19 MR. GRIFFIS: Yes, sir.

20 MS. WAGSTAFF: Which one do you want as  
21 14?

22 MR. GRIFFIS: 14 is that one.

23 BY MR. GRIFFIS:

24 Q. This is from the documents that you  
25 provided to us, sir. Okay. Marked as Exhibit 14

1 MR. GRIFFIS: Yes.

2 MS. WAGSTAFF: Okay. I object as to  
3 foundation. This is from Chris Portier.  
4 Nothing on here that shows him as the author.

5 BY MR. GRIFFIS:

6 Q. Sir, first of all, do you recognize this  
7 as a document that you were sent?

8 A. I mean, I can't recall, but if -- you  
9 know, if this was under the subpoena...

10 Q. It's a document that you provided to us.  
11 I will tell you that.

12 A. If that's the case then, yes, then I --  
13 then I would say, yeah, it was swept up. But I  
14 don't recall this specifically.

15 Q. Okay.

16 MS. WAGSTAFF: I object to any questions  
17 on this document as the deponent said he  
18 doesn't recall it.

19 BY MR. GRIFFIS:

20 Q. Do you recall Mr. Portier communicating  
21 with you about the responses that he was putting  
22 together in asking you to be part of it and sign  
23 responding to EFSA?

24 A. Yeah. We -- I was one of a  
25 approximately 93 people.

<p style="text-align: right;">Page 118</p> <p>1 Q. Yes, sir. And it says, "Thoughts on 2 EFSA response. See EFSA response." 3 Are these Chris Portier's thoughts 4 or your thoughts? 5 MS. WAGSTAFF: Object to any questions 6 on this document as the deponent has stated 7 he doesn't remember this document. 8 A. These are not my comments. 9 BY MR. GRIFFIS: 10 Q. Okay. Comment on paragraph 19, "After 11 carefully reading the current RAR, they may be 12 correct" -- that's R-A-R -- "they may be correct 13 in saying that IARC could have used these data. 14 However, second guessing this at this time is 15 wasted effort." 16 See that, sir? 17 MS. WAGSTAFF: Objection to asking 18 questions on this document, as the deponent 19 has said he does not recall it. He also 20 stated these are not his comments. 21 BY MR. GRIFFIS: 22 Q. You see that, sir? 23 A. I see it. These are not my comments. 24 Q. No, sir. I'm not saying that they are. 25 Chris Portier's comments.</p>	<p style="text-align: right;">Page 120</p> <p>1 A. IARC -- the preamble -- sorry. 2 MS. WAGSTAFF: I was going to say an 3 objection to using this document, as the 4 deponent has said he does not recall this 5 document, and this is calling for an 6 expert -- calling for expert testimony and 7 hypotheticals when he has stated all along 8 that they followed the procedures as set 9 forth in the preamble. 10 BY MR. GRIFFIS: 11 Q. So your answer? 12 A. The preamble asked us to look at the 13 publicly available literature. 14 Q. Okay. Could IARC -- I don't mean -- was 15 it a -- was it consistent with IARC's rules or 16 would it have been against the rules or not -- as 17 a scientist, doing a review of the science on the 18 mechanism, could you have used the additional data 19 found in the industry studies that were reviewed 20 by EFSA and other regulators? 21 MS. WAGSTAFF: Objection. You're asking 22 him whether or not he should have broke from 23 IARC procedure, and I think that puts the 24 deponent in a very uncomfortable position; 25 and it's an inappropriate question.</p>
<p style="text-align: right;">Page 119</p> <p>1 Would you go to paragraph 19 in 2 Exhibit 15 so that we can see what he's talking 3 about? 4 MS. WAGSTAFF: Objection. No 5 foundation. Chris Portier's comments. 6 A. Exhibit 15. 7 BY MR. GRIFFIS: 8 Q. Yes, sir. See these paragraphs are hand 9 numbered, and they match up with the comments on 10 the other. That's why I produced this one to you. 11 A. Okay. Paragraph 19? 12 Q. Right. And paragraph 19 reads, "I wish 13 to make a final but important point regarding 14 transparency. The background documents display 15 detailed information on how EFSA and Member States 16 appraised each study, including industry sponsored 17 studies and how all those which participated, 18 except Sweden, concluded that glyphosate is 19 unlikely to pose a carcinogenic hazard to humans." 20 Did I read that correctly? 21 A. Yes. 22 Q. Okay. So my question to you now, sir, 23 is, do you agree that IARC could have used those 24 data that were reviewed by EFSA and not reviewed 25 by IARC?</p>	<p style="text-align: right;">Page 121</p> <p>1 BY MR. GRIFFIS: 2 Q. Let me be clear. I'm not asking you if 3 it would have been good for you to go ahead and 4 break with IARC procedures. I'm asking you, as a 5 scientist, doing what's supposed to be an 6 objective evaluation of the available evidence on 7 glyphosate, would it have been useful to you to 8 have even more evidence to look at, i.e., the 9 evidence looked at by EFSA and not by IARC? 10 MS. WAGSTAFF: Object. 11 BY MR. GRIFFIS: 12 Q. Would that have improved or made worse 13 your evaluation of mechanism? 14 MS. WAGSTAFF: Objection. Foundation. 15 We don't even know what the data is you're 16 talking about -- the strength, weaknesses the 17 biases, anything with respect to that data. 18 MR. WHITE: When answering this, just 19 answer to the best of your ability with -- 20 from your own knowledge. All right? You 21 don't need to speculate on whether or not you 22 should or should not have been using data 23 that was not provided to you. 24 A. I don't know the answer to your 25 question. I don't know without -- I can't</p>



1 speculate. I feel like I would be speculating.

2 BY MR. GRIFFIS:

3 Q. Because you don't know what that data  
4 shows?

5 A. The form of the data, where it's  
6 published, I would -- I think it's speculative for  
7 me to say.

8 Q. Based on your understanding of the  
9 methodology that you were to follow as part of  
10 working group 112, would more information that is  
11 negative weaken your conclusion of a strong  
12 association, or is that not the way the  
13 methodology works?

14 MS. WAGSTAFF: Objection. Calls for a  
15 hypothetical and speculation on what would  
16 have happened had some fictitious data been  
17 available pursuant to the preamble.

18 BY MR. GRIFFIS:

19 Q. Do you understand the question, sir?

20 A. I do.

21 Q. Okay. So now -- and what it is, is  
22 given the procedure that you're following, given  
23 the methodology that IARC asked you to follow, you  
24 had evidence of genotoxicity that you considered  
25 to be strong. You had evidence of oxidative

1 stress that you considered to be strong.

2 What does the methodology say you  
3 are to do with additional negative information  
4 about genotoxicity and additional negative  
5 information about oxidative stress? Would that  
6 weaken or have no effect on a conclusion of  
7 strong?

8 MS. WAGSTAFF: Objection. Calls for a  
9 hypothetical. Again, talking about data that  
10 is not allowed under the preamble.

11 MR. WHITE: I advise you to only answer  
12 to the extent that you know under the  
13 preamble. All right?

14 A. Preamble says we were to evaluate the  
15 publicly available literature, and that's what we  
16 did.

17 BY MR. GRIFFIS:

18 Q. Do you know, in working group 118 and  
19 working group 119, they looked at non-published  
20 literature?

21 MS. WAGSTAFF: Objection. This is  
22 completely outside the scope when we're  
23 talking about other monographs. We're here  
24 to talk about monograph 112 and specifically  
25 the mechanism subgroup. And now you're

1 bringing up monographs 117 and 120 that we  
2 know absolutely nothing about.

3 BY MR. GRIFFIS:

4 Q. 118 and 119. Did you know that, sir?

5 MR. WHITE: If we -- if this isn't going  
6 to be brought back to the monograph that's  
7 actually at issue, I'm going to instruct him  
8 not --

9 MR. GRIFFIS: It is, sir. It is.

10 BY MR. GRIFFIS:

11 Q. Do you know that IARC doesn't always  
12 follow what you're saying is the rule of only  
13 looking at published literature? Do you know  
14 that?

15 MS. WAGSTAFF: Completely beyond the  
16 scope of this deposition. I object for that.

17 MR. WHITE: You don't have to answer  
18 that.

19 BY MR. GRIFFIS:

20 Q. Sir, do you know why the leaders of IARC  
21 chose not to look at unpublished data in working  
22 group 112?

23 MR. WHITE: To the extent of your  
24 knowledge.

25 A. Because it wasn't in the publicly

1 available database.

2 BY MR. GRIFFIS:

3 Q. And do you know why they chose to look  
4 at unpublished literature in other monographs?

5 MS. WAGSTAFF: Objection. Foundation.  
6 And beyond the scope allowed by this  
7 deposition.

8 MR. WHITE: To the extent of your  
9 knowledge.

10 MS. WAGSTAFF: And calls for  
11 speculation. How is he supposed to know what  
12 other people did or didn't do?

13 A. I didn't know.

14 BY MR. GRIFFIS:

15 Q. Were you aware before today that IARC  
16 doesn't necessarily follow a rule of not looking  
17 at unpublished data?

18 MS. WAGSTAFF: Objection. Foundation.  
19 Timing and the scope of this deposition. And  
20 his attorney has already instructed him not  
21 to answer on that.

22 MR. WHITE: That's true. You don't have  
23 to answer that.

24 BY MR. GRIFFIS:

25 Q. Sir, you came to working group 112. You

1 followed the rules. The rules, as you understood  
2 them, didn't permit you to consider registration  
3 studies, didn't permit you to consider data  
4 generated by industry, and didn't permit to  
5 consider -- although you weren't part of the  
6 decision -- the Greim data or the Hyer & Kirkland  
7 data.

8 Is that all correct?

9 MS. WAGSTAFF: Objection to the phrasing  
10 of that whereas it was the rules as he  
11 considered it. Later monographs looked at  
12 unpublished data for one reason or another as  
13 you're apparently representing. We have no  
14 idea if the rules change. We have no idea  
15 under what circumstances that happened. And  
16 we have no idea of any facts surrounding that  
17 method. It's beyond the scope of the  
18 deposition.

19 MR. GRIFFIS: I object to the continued  
20 speaking deposition [sic] which are taking  
21 more transcript than my questions.

22 BY MR. GRIFFIS:

23 Q. Everything I just said is true, right?

24 A. We were instructed to evaluate the  
25 publicly available literature.

1 Q. Right. And you know that there was a  
2 body of registration studies, a body of industry  
3 studies. There were studies mentioned in the  
4 Greim article study. There were studies mentioned  
5 in Hyer & Kirkland. And you were not to consider  
6 any of those.

7 You did know that, right?

8 A. I didn't know the specifics of the  
9 industry studies.

10 Q. Okay. And you didn't look at those  
11 studies, I know, but you know that such studies  
12 existed and that you weren't going to be looking  
13 at them?

14 A. I didn't know the scope of the industry  
15 studies.

16 Q. Okay. Do you know today that there are  
17 such studies?

18 A. Based on the Greim article?

19 MS. WAGSTAFF: Scope.

20 BY MR. GRIFFIS:

21 Q. Based on the Greim article.

22 You were copied on that e-mail  
23 before you went to working group 112 attaching the  
24 Greim article, right?

25 A. Yes.

1 Q. Okay, sir. And is it fair to say that  
2 you don't know what your conclusions would have  
3 been with regard to mechanism had you seen those  
4 studies.

5 Is that fair?

6 A. I can't speculate on that because we  
7 didn't see it.

8 Q. Right. So you're agreeing with me.

9 You don't even know what -- you  
10 didn't know how that would have affected your  
11 analysis?

12 A. I can't speculate on that because we  
13 were instructed to look at the publicly available  
14 literature.

15 Q. Okay. Now, I am going to ask you a  
16 question about the methodology that you were asked  
17 to follow.

18 And this isn't about whether you  
19 look at publicly available literature or not.  
20 This isn't about that facet of the methodology  
21 prescribed to you by IARC. It's about a different  
22 facet.

23 My question is this, sir. Were you  
24 instructed, if you find multiple articles that  
25 show, in your view, a strong genotox signal and

1 multiple articles that show a strong oxidative  
2 stress signal, plus there are a whole bunch of  
3 other articles in those same categories that are  
4 negative, what are you to do with the negative  
5 articles? Do they tend to weaken your conclusion,  
6 as to strong association, or they have no impact  
7 on it because you already have a number of  
8 articles showing this association?

9 Do you understand my question?

10 A. So we look at the overall database, and  
11 we try to balance it with positive articles --  
12 articles that suggest strong evidence versus  
13 negative evidence. So we are trying to look at  
14 the entire database as a whole and weigh that.

15 Q. So you were weighing the evidence. And  
16 if there was negative evidence that would tend to  
17 count against a conclusion -- a strong conclusion  
18 with regard to genotox or oxidative stress or any  
19 of the other ten cancer characteristics, right?

20 A. I believe the -- in the monograph that  
21 the tables lay out in a balanced way several of  
22 the positive studies and some of the negative  
23 studies, but on balance, there were more positives  
24 than negatives that helped us draw a conclusion.

25 Q. Right. And right now I'm not asking

1 about how those studies came out in your -- in  
 2 your weighing. I'm asking you about what you  
 3 understood to be the rules that you were following  
 4 in doing the weighing. And I believe you're  
 5 telling me your understanding was that, to the  
 6 extent that there are negative studies in a  
 7 particular category, those tend to count against a  
 8 finding of strong.

9 And to the extent that there are  
 10 positive studies, they tend to count for a finding  
 11 of strong, and you -- you weigh them; is that  
 12 correct?

13 A. Within the publicly available  
 14 literature, we try to weigh both sets of data.

15 Q. Okay. And so you try to weigh both sets  
 16 of data within the literature that you were  
 17 provided as part of working group 112 and the  
 18 publicly available literature that you found. And  
 19 you -- and to the extent that there was negative  
 20 data in that data set, it counted against your  
 21 conclusion of strong.

22 That's fair?

23 A. We would weigh all the studies together,  
 24 positive and negative.

25 Q. All right. Is your lab here at MSU a

1 GLP lab?

2 A. No.

3 Q. Are there any GLP labs at MSU?

4 MS. WAGSTAFF: Object to scope. Whether  
 5 or not Mississippi State University has a GLP  
 6 lab has nothing to do with the mechanisms of  
 7 that group's conclusions about glyphosate,  
 8 completely irrelevant.

9 MR. WHITE: You can answer to your  
 10 knowledge?

11 A. I'm not aware. I don't know if there  
 12 are or not.

13 BY MR. GRIFFIS:

14 Q. Okay. Do you know generally how GLP  
 15 certification is achieved?

16 MS. WAGSTAFF: Objection. This is not  
 17 relevant to the scope of this deposition.

18 MR. WHITE: Only to your knowledge.

19 A. My only knowledge is from work I did in  
 20 a contract lab back in the early '90s that was GLP  
 21 certified. So that is my knowledge of GLP.

22 BY MR. GRIFFIS:

23 Q. Okay.

24 A. When I worked in a contract lab.

25 Q. Okay. You worked in a GLP lab?

1 A. Yes.

2 Q. And your -- there were independent  
 3 auditors in that lab, correct?

4 A. We would have auditors that came in  
 5 either from the company or from government, in  
 6 EPA, for example.

7 Q. The company auditors -- I don't know if  
 8 you knew this or not -- but did you know that they  
 9 were required to have a different management than  
 10 the management of the lab so that they're  
 11 reporting to different people?

12 MS. WAGSTAFF: Objection. This is  
 13 getting way beyond monograph 112 and whether  
 14 or not he knows about the management of GLP  
 15 labs.

16 A. I don't know that level of detail about  
 17 GLP.

18 BY MR. GRIFFIS:

19 Q. Okay, sir.

20 (Exhibit No. 13-16 marked for  
 21 identification.)

22 BY MR. GRIFFIS:

23 Q. Sir, Exhibit 16 is an e-mail from you to  
 24 Dr. Rusyn, March 11th of 2015, which is the day  
 25 you left Lyon, right?

1 A. Yes.

2 Q. And you told him, "You did a fantastic  
 3 job as chair," and asked to keep in touch, right?

4 A. Yes.

5 Q. Okay. And you were responding to a  
 6 March 9th -- you weren't responding to the  
 7 substance, but you clicked respond on a March 9th  
 8 e-mail from Dr. Rusyn, correct?

9 A. Yes.

10 Q. Okay. And Dr. Rusyn wrote, "I would  
 11 like to convene group 4 downstairs in the first  
 12 coffee break to discuss the information below,"  
 13 correct?

14 A. Yes.

15 Q. Okay. And March 9th was the second to  
 16 last day of working group 112, right?

17 A. Yes.

18 Q. Okay. This e-mail -- we don't have some  
 19 of the header information. In Dr. Rusyn's e-mail,  
 20 your system that you were using didn't include it.

21 But was this e-mail sent to you and  
 22 the others in group 4?

23 A. I would -- it was sent to me. I would  
 24 assume all the members received it.

25 Q. And did you, in fact, convene downstairs

1 in the first coffee break to discuss the  
2 information?

3 A. We did to discuss a potential upgrade.

4 Q. Okay. And what do you mean by upgrade?

5 A. The mechanistic upgrade. If animal data  
6 was considered limited and the human epi data was  
7 considered limited by the IARC rubric in the  
8 preamble, if there was mechanistic information  
9 that was considered strong by the subgroup, we  
10 could consider an upgrade.

11 Q. So you wanted to make sure we were all  
12 on the same page, we being group 4, correct?

13 A. Yes.

14 Q. Lower the evaluations from groups 2 and  
15 3 in the IARC matrix. You apparently attached the  
16 matrix; although, that didn't come through in what  
17 you sent us, right?

18 A. Where's the matrix? I'm sorry. I don't  
19 see what.

20 Q. I'm reading from the e-mail. "Just to  
21 make sure we're on the same page, below are the  
22 evaluations from groups 2 and 3 and the IARC  
23 matrix."

24 A. Oh, okay.

25 Q. And there's some image that was attached

1 but didn't come through in what you provided to  
2 us, presumably the matrix.

3 "To get us to understand where our  
4 conclusions fit." That's what he wrote, right?

5 A. Yes.

6 Q. With regard to glyphosate, he said,  
7 "human limited." That's group 2, finding of  
8 limited. Group 3, finding of limited.

9 Correct?

10 A. At this -- well, at -- I don't know what  
11 was going on in group 2. I am not privy to their  
12 conversations, but it is -- it says "animal,  
13 limited" there. So he was convening a meeting --

14 Q. He says below --

15 A. -- to discuss --

16 Q. Yes, sir.

17 And he was -- this is at 9:00, so  
18 it's after both plenary sessions for the day,  
19 right?

20 MS. WAGSTAFF: Objection. Where do you  
21 see that it's at 9:00?

22 MR. GRIFFIS: I'm sorry. I'm wrong.

23 It's at 4:42.

24 BY MR. GRIFFIS:

25 Q. It's at a break from the plenary

1 session, correct?

2 MS. WAGSTAFF: Well, object to that. We  
3 don't if it's a.m. or p.m.

4 A. I don't know what time it is.

5 BY MR. GRIFFIS:

6 Q. Were you taking a coffee break at 4:42  
7 a.m. or 4:42 p.m., sir?

8 A. No. This was not a -- we were  
9 meeting -- the first coffee break, that would be  
10 in the morning.

11 Q. The first coffee -- so was this meeting  
12 to be held on the 9th or the 10th?

13 A. I don't recall.

14 Q. All right. Anyway, he was -- he said,  
15 "Below are the evaluations from groups 2 and 3."  
16 And the evaluation that he reported from group 2  
17 was human glyphosate -- human, limited. And the  
18 evaluation that he reported for group 3 for  
19 glyphosate was animal, limited. Correct?

20 A. That's what's written here.

21 MS. WAGSTAFF: Object to the form.

22 BY MR. GRIFFIS:

23 Q. And what would -- you were in the  
24 plenary sessions, right, sir?

25 A. Yes.

1 Q. What was the basis for the finding of  
2 limited in the animal study group as of March 9th?

3 MS. WAGSTAFF: I'm going to object to  
4 the suggestion that these were announced at  
5 the plenary session. Nowhere on here that I  
6 can see does it say that Dr. Rusyn got this  
7 from the plenary session. We don't know  
8 where he got them from.

9 A. I don't recall what -- the discussion  
10 regarding the limited evidence.

11 BY MR. GRIFFIS:

12 Q. Do you know, sir, whether Dr. Rusyn got  
13 this from a public session that you were present  
14 at or from a closed session where only he and a  
15 few other people were present?

16 A. I don't know.

17 Q. Do you know where Dr. Rusyn got the  
18 impetus to ask for an upgrade?

19 MS. WAGSTAFF: Objection. Calls for  
20 speculation.

21 A. Part of the rubric or the preamble gives  
22 the mechanistic group the ability -- well, to  
23 propose an upgrade if the evidence warrants it.

24 BY MR. GRIFFIS:

25 Q. He says -- okay. And I want to finish

1 out my question.

2 Do you have any understanding as to  
3 the basis for the animal group's evaluation, as of  
4 March 9th, being limited?

5 MS. WAGSTAFF: Objection. Asked and  
6 answered.

7 A. I don't know. I don't know the basis of  
8 what was -- what they considered limited.

9 BY MR. GRIFFIS:

10 Q. Earlier you told -- you testified that,  
11 in your opinion, the most controversial issue with  
12 regarding to glyphosate was group 3's  
13 classification as between limited and sufficient  
14 with regard to particular animal tumor data; is  
15 that right?

16 A. This was the main issue. This was an  
17 important issue. There was a lot of debate about  
18 it.

19 Q. And when did you witness that debate or  
20 hear about that debate?

21 A. In the plenary session.

22 Q. There was debate at the plenary session  
23 between limited and sufficient in the animal study  
24 group; is that right?

25 A. There was -- in the early plenary

1 session, there was -- there was debate. There was  
2 further analysis going on, but I was not privy to  
3 all that data analysis because I am not a cancer  
4 biologist. So it was out of my -- my expertise.

5 Q. What was being said by the advocates for  
6 the limited view in those sessions that you  
7 witnessed advocating for a limited finding?

8 A. What was said?

9 Q. Yes, sir.

10 A. I don't recall.

11 Q. Who was making -- who was making the  
12 points in favor of a limited deal?

13 MS. WAGSTAFF: Objection. Asked and  
14 answered. He said he didn't know that.

15 A. I really don't recall who was arguing.  
16 At this stage, I was busy getting my drafts  
17 together, doing some fact-checking. I know there  
18 was lots of debate. It wasn't in my area of  
19 expertise, so the -- in the conversations that  
20 were going in the group 3 where I wasn't present  
21 for it.

22 Q. And in evaluating it as the most  
23 contentious issue with regard to glyphosate at  
24 working group 112, what were you basing that on?  
25 Hearing people argue and not understanding the

1 arguments or what?

2 A. No. There was a --

3 MS. WAGSTAFF: Objection.

4 Argumentative.

5 A. Yeah. There was a lot of debate. There  
6 was a lot of scientific debate about the evidence  
7 about -- and how it fit with the preamble.

8 BY MR. GRIFFIS:

9 Q. And as you're sitting here, you can't  
10 remember anything about that debate or who was  
11 advocating on which side?

12 MS. WAGSTAFF: Objection. Asked and  
13 answered.

14 A. I -- I don't recall. I -- I don't  
15 recall the limited -- who was advocating for  
16 limited. I don't recall who -- who was advocating  
17 for a limited stance.

18 BY MR. GRIFFIS:

19 Q. Was it only the members of the -- of  
20 group 3 who were having that debate, or was Chris  
21 Portier or Kurt Straif or Dr. Rusyn or anyone else  
22 also participating in it?

23 A. There was debate with the whole group in  
24 the plenary session. There was debate going on  
25 with several scientists.

1 Q. Any from group 4?

2 A. Yes.

3 Q. Who?

4 A. Dr. Rusyn. He was -- he was debating  
5 the evidence.

6 Q. He was advocating for a finding of  
7 sufficient, correct?

8 A. I don't -- that word "advocate," I --  
9 you know, I don't recall if it was -- he didn't  
10 use the word "advocate."

11 Q. Yes, sir. You used the word "debate"  
12 earlier.

13 A. Yeah. Debate about the evidence. Or  
14 there's debate about how to deal with this animal  
15 cancer bioassay data. We had, you know, multiple  
16 species getting tumors, different types of tumors,  
17 so there was debate there.

18 Q. What analyses or reanalyses of the  
19 cancer data are you aware of from being a  
20 participant in working group 112?

21 MS. WAGSTAFF: Objection. He testified  
22 he did not participate in the animal  
23 subgroups.

24 A. I don't know what analyses or reanalyses  
25 were being conducted. I know on the -- on the --

1 they have -- they stated in the monograph what  
2 statistical analyses were being used. But I am  
3 not familiar with what was done.

4 BY MR. GRIFFIS:

5 Q. Okay. Was Chris Portier involved in the  
6 debate over whether the animal group conclusion  
7 should be limited or sufficient?

8 A. I don't recall him specifically. I  
9 don't can't recall.

10 Q. Was Kurt Straif involved in that debate?

11 MS. WAGSTAFF: You now asked him seven  
12 different times if he recalls who was  
13 involved in the debate on which side, and  
14 every time he said he doesn't recall. So I'm  
15 not quite sure we need to stay on this topic.

16 A. I don't recall if Kurt was involved in  
17 the discussion. He may have been trying to  
18 form -- you know, mediate, be a moderator, as his  
19 role as the head of the IARC monographs. But  
20 that's, I mean, certainly not advocating for one  
21 side or the other.

22 BY MR. GRIFFIS:

23 Q. Dr. Rusyn says, after he reports that  
24 the animal group, as of March 9th, was -- had a  
25 finding of limited. "I have questions on the

1 limited in animals because there are two studies  
2 showing significant effect."

3 You see that, sir?

4 A. Yes.

5 Q. Did Dr. Rusyn express during this coffee  
6 break meeting or any other time his position that  
7 limited was the wrong conclusion and sufficient  
8 was the correct conclusion for the animal studies  
9 group?

10 MS. WAGSTAFF: Objection as to scope.

11 This deposition was noticed to explore the  
12 mechanism subgroup's conclusions about  
13 glyphosate, and you are directly asking him  
14 about some other person's opinion on the  
15 animal subgroup.

16 A. I think he was questioning these two  
17 studies showing a significant effect, and I don't  
18 recall which two studies they are. Again, I don't  
19 think he was strongly advocating limited or  
20 sufficient at that time.

21 BY MR. GRIFFIS:

22 Q. During this coffee break meeting or at  
23 any other meetings with Dr. Rusyn, did he express  
24 in front of you what his questions were on the  
25 classification as limited?

1 MS. WAGSTAFF: Same objection as to  
2 scope. This deposition was noticed to  
3 explore the mechanism subgroup's conclusion  
4 about glyphosate, and you're asking him  
5 questions about some other scientist's  
6 opinion on the animal subgroup.

7 A. I don't recall what his questions were  
8 about limited.

9 BY MR. GRIFFIS:

10 Q. Again, sir, the point of this meeting --  
11 this coffee break meeting on the second to last  
12 day of working group 112 was to talk about an  
13 upgrade, which is an interaction between the  
14 mechanism group's conclusions and those of the  
15 animals study's group to alter the classification;  
16 is this right?

17 MS. WAGSTAFF: Object to the form.

18 A. It was meeting to -- as to whether the  
19 mechanistic subgroup should bring forward to the  
20 whole group in the plenary session whether a  
21 mechanistic upgrade should be voted on or asked  
22 for.

23 BY MR. GRIFFIS:

24 Q. Tell us what happened at this meeting.

25 A. Which particular meeting?

1 Q. The first coffee break meeting that  
2 Dr. Rusyn convened on the second to last day of  
3 working group 112?

4 A. So it dealt with the mechanistic  
5 evidence we had. We had given the qualitative  
6 descriptor of strong to both the genotoxicity data  
7 and the oxidative stress data. These were two of  
8 the ten characteristics of the human carcinogens.  
9 And the debate or the question that was being  
10 raised was whether we bring it forward to  
11 upgrade -- as an upgrade in the plenary session.  
12 Was it -- was the group comfortable with that  
13 approach.

14 Q. Was Dr. Rusyn's recommendation that the  
15 group bring it forward, and he was seeing if you  
16 were comfortable with that approach?

17 MS. WAGSTAFF: Objection. Scope.

18 A. It wasn't his recommendation. He took a  
19 straw poll of the group -- of the subgroup.

20 BY MR. GRIFFIS:

21 Q. Did he lay out the analysis before he  
22 took the straw poll?

23 A. The analysis was in the monograph in the  
24 drafts of the mechanistic section. So the  
25 rationale is in the monograph for labeling the

1 genotoxicity data as strong evidence and the  
2 oxidative stress data as indicating strong  
3 evidence. So the rationale was there. So we were  
4 familiar with that.

5 Q. Okay. And as to all three of the  
6 substances that he wanted to talk about --  
7 malathion, diazinon, and glyphosate -- he was  
8 either supporting saying we support the  
9 classification in 2-A or suggesting considering  
10 upgrade to 2-A, correct?

11 A. This is for glyphosate?

12 MS. WAGSTAFF: Object.

13 BY MR. GRIFFIS:

14 Q. For malathion, diazinon, and glyphosate.  
15 Should I ask the question again,  
16 sir?

17 A. Let me just read this.

18 Q. Sure. Okay.

19 A. Okay, sir. Your question?

20 Q. Yes, sir. In this meeting that  
21 Dr. Rusyn convened on the last day -- second to  
22 last day of working group 112, with regard to all  
23 three of the substances that he addressed in his  
24 e-mail, you were either already at 2-A or he was  
25 suggesting considering an upgrade to 2-A; is that

1 meeting on March 9th was the mechanism group  
2 agreeing to support an upgrade as to diazinon and  
3 to glyphosate, but it never became necessary for  
4 the mechanism group to put that into effect at a  
5 plenary session because the animal group moved; is  
6 that right?

7 A. For glyphosate.

8 Q. For glyphosate.

9 What happened with diazinon?

10 MS. WAGSTAFF: Objection. Scope.

11 Irrelevant to this litigation.

12 A. I can't recall. We'll have to look at  
13 the monograph.

14 BY MR. GRIFFIS:

15 Q. Okay. Was Chris Portier at that  
16 meeting, coffee breaking?

17 A. I don't recall.

18 Q. Okay. And, sir, I have some questions  
19 for you about your understanding of the nature of  
20 the review that you were conducting as a member of  
21 working group 112. I'll show you a document on  
22 that first. Okay. If I can find it.

23 (Exhibit No. 13-17 marked for  
24 identification.)

25 MR. GRIFFIS: I only have two copies of

1 right?

2 A. For malathion, we were at 2-A.

3 Q. And for the other two, he suggested  
4 considering an upgrade to 2-A, right?

5 A. He was -- yes. He was asking whether we  
6 should consider an upgrade to 2-A.

7 Q. And the group decided to upgrade to 2-A  
8 as to both of those, right?

9 A. Glyphosate, we didn't upgrade. Right.  
10 We did -- didn't -- there was no upgrade because  
11 the final conclusion for the human data with  
12 limited evidence -- and for the animal data, it  
13 was considered sufficient based on IARC's rubric,  
14 that constitutes a 2-A classification. So we did  
15 not need to propose an upgrade.

16 Q. Well, when you walked out of this  
17 meeting, what had you decided about proposing an  
18 upgrade?

19 A. That's while the meeting is going on.  
20 So we -- he had taken -- we had taken a straw  
21 poll, and we supported the proposal to upgrade if  
22 necessary. That never occurred, though. That  
23 never happened because it was 2-A based on the  
24 animal data and the human data.

25 Q. So the outcome of this coffee break

1 that.

2 BY MR. GRIFFIS:

3 Q. Okay. Sir, on March 30th of 2015,  
4 someone named Nathaniel Harmon, who I assume you  
5 didn't previously know, e-mailed you saying he  
6 worked for Guide Point, inviting you to talk to a  
7 client who was an institutional investor about  
8 glyphosate; is that right?

9 A. Yes.

10 Q. And you declined the invitation but told  
11 Mr. Harmon some things about the nature of the  
12 evaluation that you had performed as a member of  
13 working group 112; is that right?

14 A. Yes.

15 Q. First of all, you corrected him that it  
16 wasn't a study.

17 It was a review of scientific  
18 literature, right?

19 A. Yes.

20 Q. And you stress that IARC deals with  
21 hazard identification as opposed to a risk  
22 assessment; is that right?

23 A. Correct.

24 Q. And hazard identification, as you  
25 described to Mr. Harmon, is a classification

<p style="text-align: right;">Page 150</p> <p>1 indicating the strength of the evidence that a 2 substance can cause cancer, right? 3 A. Correct. 4 Q. And it's different than a risk 5 assessment, which defines the level of 6 carcinogenic risk for individuals; is that right? 7 A. Correct. 8 Q. And you referred him to the IARC 9 preamble on that subject? 10 A. Yes. 11 Q. Okay. And you have the preamble there, 12 sir. The preamble is Exhibit 10. 13 A. Okay. 14 Q. On Page 2, sir, the preamble in the 15 third full paragraph under objective and scope -- 16 A. I'm sorry. What page? 17 Q. Page 2. 18 A. Page 2. 19 Q. Under the heading of objective and 20 scope. 21 A. I'm not finding it. 22 Q. The pages -- when I say Page 2, I mean 23 the page numbered 2, not the second page. 24 A. Can you point it out to me? 25 Q. I'm sorry. The numbers start here.</p>	<p style="text-align: right;">Page 152</p> <p>1 expert opinion. And it's -- you've just 2 asked him to admit that the IARC doesn't look 3 at risk assessments, so now you're -- you 4 shouldn't be asking about risk assessments as 5 a fact witness on the IARC 112. 6 A. This -- so your question is hazard -- 7 hazard versus risk? 8 BY MR. GRIFFIS: 9 Q. Yes, sir. 10 A. And we were dealing with a hazard 11 assessment in IARC. Risk assessments was not our 12 job. 13 Q. Right. And I just wanted to -- these 14 questions are so that we can understand and the 15 jury can understand what you understood yourself 16 to be doing as a member of working group 112. 17 That's why I'm asking you about this, sir. 18 You understood, as a member of 19 working group 112, in identifying glyphosate as 20 being a cancer hazard, that it could be that 21 humans would not be exposed to glyphosate at a 22 level that could be a threat to them, whether it's 23 a hazard or not. True? 24 MS. WAGSTAFF: Objections. Calls for 25 expert opinion. He's now said two times that</p>
<p style="text-align: right;">Page 151</p> <p>1 A. Okay. Got you. 2 Q. There's no numbers on the first two 3 pages. Page 2, objective and scope, third full 4 paragraph. This is -- this is the methodology 5 that you were following. "Cancer hazard is an 6 agent that is capable of causing cancer under some 7 circumstances; while a cancer risk is an estimate 8 of the carcinogenic effects expected from exposure 9 to a cancer hazard," correct? 10 A. Yes. 11 Q. Okay. 12 A. That's what the IARC preamble says. 13 Q. And it says -- it goes on to say in that 14 same paragraph that, "The monograph identified 15 cancer hazards even when risks are very low at 16 current exposure levels, and that's because new 17 uses or unforeseen exposures could engender risks 18 that are significantly higher; is that right? 19 A. Yes. 20 Q. Okay. So under this hazard versus risk 21 approach, it is possible for a substance to be a 22 hazard without actually being a risk to causing 23 human cancers. 24 Is that fair? 25 MS. WAGSTAFF: Objection. Calls for</p>	<p style="text-align: right;">Page 153</p> <p>1 he didn't do risk assessments. So asking him 2 whether or not humans are exposed at a level 3 that's dangerous is a back door way of asking 4 for an expert opinion, and it's 5 inappropriate. 6 A. I'm not an expert in risk assessment. 7 My role here was to study the toxicokinetic 8 database. 9 BY MR. GRIFFIS: 10 Q. And you were a member of the whole 11 working group on the entire issue of mechanism, 12 right? 13 A. Correct. 14 Q. Okay. Based on your work and your 15 conclusions and what the mechanism group did, the 16 mechanism group's conclusions do not translate to 17 a statement that glyphosate is capable of causing 18 cancer in humans at levels at which humans are 19 actually exposed. 20 Because you didn't look at the 21 exposure issue, correct? 22 MS. WAGSTAFF: Objection. Calls for 23 expert opinion. It's not a negative or a 24 positive finding in that way, I believe that 25 the doctor has said.</p>



1 A. There is an exposure subgroup in the  
2 IARC panel that deals with exposures.

3 BY MR. GRIFFIS:

4 Q. No. The --

5 A. So there is evidence of exposure, human  
6 exposure.

7 Q. Yes. Whether humans are exposed.

8 A. Right.

9 Q. And there's some information as to the  
10 ways that they're exposed.

11 But my question is a little  
12 different, sir. As a member of working group 112  
13 and a member of the mechanism subgroup, your  
14 conclusions about glyphosate being a hazard with  
15 regard to carcinogenicity does not translate into  
16 a statement that glyphosate is capable of causing  
17 cancer in any particular actual human at the  
18 levels to which they are exposed?

19 MS. WAGSTAFF: Objection. Calls for an  
20 expert opinion. That's not what he's tested,  
21 and he's has admitted he's not an expert on  
22 risk assessment. This line of questioning is  
23 inappropriate.

24 MR. WHITE: I believe he's answered more  
25 than one time that the analysis that they did

1 was for -- not for risks but for hazards.

2 I'm not sure that we need to keep asking the  
3 same question.

4 BY MR. GRIFFIS:

5 Q. Okay. So that the jury can understand  
6 what you understood yourself to be doing and the  
7 meaning of the procedure you were following in  
8 following the preamble, sir, it is true that we  
9 can't conclude that any particular human being  
10 ever got cancer from glyphosate from IARC's  
11 findings.

12 Is that true?

13 MS. WAGSTAFF: Objection. Calls for  
14 expert opinion. Misstates the testimony and  
15 the preamble.

16 MR. WHITE: Yeah. You only have to  
17 answer to the extent of your knowledge based  
18 on hazard versus risk. You do not have to  
19 offer any kind of opinion.

20 A. I think you're asking me to give an  
21 opinion.

22 BY MR. GRIFFIS:

23 Q. I'm asking you to help the jury  
24 understand what hazard means, that you were doing  
25 a hazard assessment and that you were aiming to

1 point out the difference between hazard and risk,  
2 which you told them is done by regulatory  
3 bodies -- risk assessment if done by regulatory  
4 bodies.

5 MS. WAGSTAFF: I object. You're asking  
6 him to take the hazard definition and the  
7 risk definition as put in the preamble and  
8 apply the risk definition to what they -- the  
9 IARC found about hazards. And I feel that  
10 that is an expert opinion, and I feel that  
11 his attorney is appropriate in instructing  
12 him not to answer.

13 BY MR. GRIFFIS:

14 Q. IARC did not find that any human ever  
15 got cancer from glyphosate, right?

16 MS. WAGSTAFF: Objection. Misstates the  
17 record.

18 A. IARC's conclusion is that glyphosate  
19 falls under two way designation. Probably  
20 carcinogenic to humans. And that's, I think, all  
21 I can say.

22 BY MR. GRIFFIS:

23 Q. Is it consistent or inconsistent with a  
24 finding of 2-A, given the scope of the review that  
25 you conducted and given that it was a hazard

1 assessment, that glyphosate has never caused  
2 cancer in any human being?

3 MS. WAGSTAFF: Objection. You're  
4 calling for an expert opinion again. He's  
5 just told you that all he can say is that  
6 glyphosate -- or that IARC found it a 2-A.  
7 And now you're asking him to apply and come  
8 up with an expert opinion, which is  
9 inappropriate.

10 A. I'm not an expert in risk assessment, so  
11 I can't really give you an answer on that.

12 BY MR. GRIFFIS:

13 Q. Okay. Sir, so is it fair to say that  
14 you can't say whether IARC's conclusion that  
15 glyphosate is classified as 2-A is consistent with  
16 glyphosate never having caused any actual human  
17 cancer?

18 MS. WAGSTAFF: Objection. You're doing  
19 a back door question to get him to give an  
20 expert opinion, and that's inappropriate.

21 BY MR. GRIFFIS:

22 Q. You can't say?

23 MS. WAGSTAFF: Same objection. Calling  
24 for expert opinion. I think it's  
25 inappropriate.

1 MR. WHITE: You can answer whether or  
2 not you have knowledge but not --

3 A. Glyphosate was deemed to be 2-A by the  
4 working group.

5 BY MR. GRIFFIS:

6 Q. Yes, sir. And as a member of the  
7 working group, I just wanted to know whether it's  
8 your understanding that glyphosate could be 2-A  
9 and that no human being ever got cancer from  
10 glyphosate. Because that's a risk issue, not a  
11 hazard issue.

12 Is that your understanding, or am I  
13 wrong about that?

14 MS. WAGSTAFF: Objection. Once again,  
15 you're calling for an expert opinion. He's  
16 told you what IARC did as a hazard report.  
17 He told you the conclusion. And you're  
18 asking him to apply a risk assessment.

19 A. I can't say for sure -- you don't know.  
20 You don't -- 100 percent certainty that glyphosate  
21 never caused cancer, you can't say that.

22 BY MR. GRIFFIS:

23 Q. You can't say one way or the other?

24 MS. WAGSTAFF: Objection. Calls for an  
25 expert opinion.

1 MR. WHITE: You don't have to answer  
2 that. We've been down this. You've asked  
3 the same question a number of times, and he's  
4 given his answer.

5 MR. GRIFFIS: Let's take five minutes.

6 VIDEOGRAPHER: Off record at 2:04.  
7 (A short recess was taken.)  
8 (Exhibit No. 13-18 marked for  
9 identification.)

10 VIDEOGRAPHER: Back on record at 2:11.

11 BY MR. GRIFFIS:

12 Q. Doctor, I handed you Exhibit 18, which  
13 is an Environmental Health Perspective, and I  
14 believe this is one you alluded to earlier in the  
15 deposition, correct?

16 A. Yes.

17 Q. This is the document setting forth what  
18 you've called a few times the 10 key  
19 characteristics of carcinogens; is that right?

20 A. Yes.

21 MS. WAGSTAFF: Objection. Misstates the  
22 testimony. He stated they were on the  
23 website. And I object to any documents that  
24 were after IARC being within the scope of  
25 this deposition.

1 BY MR. GRIFFIS:

2 Q. Okay. Sir, where did you -- how did you  
3 come to understand that the source of the 10 key  
4 characteristics of carcinogens which you were to  
5 apply as a member of working group 112 came from  
6 the Environmental Health Perspective document?

7 A. Well, Kate Guyton, the meeting rapitor,  
8 was an author on it. So she was aware of this  
9 article. This was received 5th of March. So she  
10 was aware, and she had given us a Powerpoint  
11 presentation on these key characteristics as a way  
12 to prepare for evaluating the data. There was  
13 a -- I believe it was on the IARC website, too.

14 Q. So Kathryn Guyton had you follow this  
15 procedure as part of your methodology. And it was  
16 submitted -- it was received by the journal  
17 actually during the working group's review; is  
18 that right?

19 A. Yes. It was received.

20 Q. And it's correct that it hadn't been  
21 accepted for publication until after working group  
22 112 had already left; is that right?

23 A. Yes.

24 MS. WAGSTAFF: Object to the question.  
25 He stated that these 10 points were on the

1 IARC website unrelated to a publication that  
2 they were a policy of the IARC. So any  
3 suggestion that this was unpublished  
4 manuscript we would object to.

5 BY MR. GRIFFIS:

6 Q. Do you know, sir, if the procedure that  
7 you followed of putting carcinogens into ten  
8 different bins was a published peer-reviewed  
9 procedure before working group 112?

10 A. So this -- this paper -- the idea of  
11 characteristics of carcinogens actually derives  
12 from an earlier paper published in Cell about the  
13 10 different cellular mechanisms that can happen  
14 during the carcinogenic process and cancer  
15 progression.

16 So it was -- there was a Cell paper  
17 published -- oh, a few years ago by some eminent  
18 cell cancer biologist who -- who brought up the  
19 issues that these key characteristics of  
20 carcinogens might fit into, like cell  
21 proliferation, receptor mediated effects  
22 genotoxicity, DNA repair.

23 These -- these known mechanisms by  
24 which a cell becomes a cancer cell, the various  
25 steps that have to take place.

1 Q. And did these Cell articles propose  
2 using those the ten characteristics as a screening  
3 tool for hazard?

4 A. No. No, not at all.

5 Q. Do you know --

6 A. This is -- yeah -- no.

7 Q. Okay. So this is the first publication  
8 that proposes using those ten characteristics as a  
9 screening tool for hazard?

10 A. This one right here, DHP article, the  
11 mechanistic data is vast, so this was a way to  
12 organize and consolidate and compile the data --

13 Q. Okay. So as a --

14 A. -- in a logical way.

15 Q. Yes, sir.

16 So as a methodology, this process  
17 that you went through, this methodology that you  
18 applied as a member of working group 112, didn't  
19 get published and peer reviewed until after you  
20 had already left Lyon.

21 Fair?

22 A. This article wasn't in -- yeah. In  
23 press until after the -- until after the meeting.

24 Q. Okay. I'd like to take a look at the  
25 authors, sir.

1 BY MR. GRIFFIS:

2 Q. Do you know, sir, that multiple authors  
3 of this paper and multiple signatories of EFSA  
4 letter that you were asked to sign off on and the  
5 differences letter that Chris Portier asked you to  
6 sign off on were members of the Ramazzini  
7 Institute or the Collegium Ramazzini?

8 A. No.

9 Q. Okay. You don't know anything about the  
10 funding of the Ramazzini Institute or Collegium  
11 Ramazzini?

12 A. No.

13 Q. Okay. This -- in this paper under the  
14 acknowledgment section on Page 2, it says, "We  
15 thank all other members of the 2012 working group  
16 who attended the workshops in Lyon, France," and,  
17 of course, you weren't part of a working group in  
18 2012; is that right?

19 A. Thank all members of the 2012 working  
20 group?

21 Q. Yes.

22 A. Did you say volume 12?

23 Q. 2012.

24 A. 2012 working group. Yeah. Yeah. I  
25 wasn't a member of that.

1 A. Uh-huh (affirmative response).

2 Q. And, first of all, have you heard of  
3 either the Ramazzini Institute or the Collegium  
4 Ramazzini?

5 A. No.

6 Q. Never been asked to be a Ramazzini  
7 fellow?

8 A. No.

9 Q. Okay. And do you know of any link  
10 between the Ramazzini Institute or the Collegium  
11 Ramazzini and IARC?

12 A. No.

13 Q. You ever heard of a Ramazzini fellow?

14 A. No.

15 Q. Okay. And I don't know well, sir.  
16 You're making a face and shaking your head.

17 A. Oh, I'm sorry. This Ramazzini.

18 Q. Does it ring a little bell, or you just  
19 have no idea what --

20 A. No. I'm sorry.

21 MS. WAGSTAFF: Are you seeing that word  
22 on here, or is that just a different  
23 question?

24 MR. GRIFFIS: It's not on here.

25 MS. WAGSTAFF: Okay.

1 Q. All right. And on Page 4 in the Smith  
2 article, sir, under background, the second  
3 sentence, it says, "This exercise was complicated  
4 by the absence of a broadly accepted systematic  
5 method for evaluating mechanistic data to support  
6 conclusions regarding human hazard from exposure  
7 to carcinogens."

8 Did I read that right?

9 A. Yes.

10 Q. Okay. Is it correct that, as of the  
11 time the working group met, there was not a  
12 broadly accepted systematic method to evaluate  
13 mechanistic data to support conclusions about  
14 human hazard to exposure to carcinogens?

15 A. I think there were approaches to  
16 consolidate the data, but this was an attempt to  
17 logically place the evidence in these -- in these  
18 10 key characteristics.

19 Q. And since this article was submitted for  
20 publication, have there been other attempts by  
21 others authors to do that?

22 A. I believe IARC uses this as their  
23 approach in all -- all mechanistic evaluations  
24 now.

25 Q. Yes, sir. I'm asking something

<p style="text-align: right;">Page 166</p> <p>1 different. I'm asking about published literature 2 on the subjective use of mechanism in hazard 3 assessment. 4 Has anyone else proposed an 5 alternative methodology to this one? 6 A. Not that I'm aware of. 7 Q. Okay. Is that an area of literature 8 that you follow -- that you'd be likely to know or 9 just don't happen to know? 10 A. It's not -- no. I just don't know. 11 Q. Okay. Now, on Page 6, I'm looking at 12 the middle paragraph and starting about the middle 13 of it. 14 "Herein, we describe" -- you see 15 that? 16 A. Uh-huh (affirmative response). 17 Q. "Herein, we describe these 10 key 18 characteristics and discuss their importance in 19 carcinogenesis. These characteristics are 20 properties that human carcinogens commonly show 21 and can encompass many different types of 22 mechanistic influence. They are not mechanisms in 23 and of themselves, nor are they adverse outcome 24 pathways." 25 Did I read that right?</p>	<p style="text-align: right;">Page 168</p> <p>1 Dr. Guyton did present to us the key 2 characteristics -- the 10 key characteristics. 3 Q. And that's the procedure you followed? 4 A. And that is. 5 Q. Okay. You don't understand what was 6 meant by, "These 10 key characteristics are not 7 mechanisms in and of themselves"? 8 A. I'm not -- I'm clear on what this is 9 meant -- "they are not mechanisms in and of 10 themselves." I am not -- I can't read the mind of 11 the author. 12 Q. Let's go to Page 10. Characteristic 2 13 is genotoxic, and this is one of the two of the 14 ten characteristics where the working group 112 15 found a strong connection, correct? 16 A. Correct. 17 Q. The weight of the evidence that you 18 evaluated was strong, right? 19 A. Correct. 20 Q. I am looking at the first full paragraph 21 under genotoxic and the last sentence, "DNA damage 22 by itself is not a mutation," correct? 23 MS. WAGSTAFF: Are you asking if that's 24 what it says, or are you asking -- 25 MR. GRIFFIS: So far I'm asking if</p>
<p style="text-align: right;">Page 167</p> <p>1 A. Yes. 2 Q. Could you explain to the jury, please, 3 what it means -- the statement that "they are not 4 mechanisms in and of themselves" means and what 5 the statement "they are not adverse outcome 6 pathways" means? 7 MS. WAGSTAFF: I'm going to object to 8 the use of this document as it was clearly 9 developed and finalized after the monograph 10 112, and Dr. Ross was not an author of this 11 document. And he has testified that he -- 12 that they have a similar set of 10 13 characteristics, but not this document. 14 A. I don't really follow -- I mean, I'm not 15 sure what is meant by this sentence, as I didn't 16 write this sentence. I believe adverse outcome 17 pathways relates to risk assessments. 18 MS. WAGSTAFF: Objection. Calls for 19 speculation on what others meant. 20 BY MR. GRIFFIS: 21 Q. This material -- I mean, this is Kathryn 22 Guyton's proposal for how hazard assessments 23 should be done, and she presented on this to you, 24 correct? 25 A. This is of this whole group here, but</p>	<p style="text-align: right;">Page 169</p> <p>1 that's what it says. 2 A. Yes. 3 BY MR. GRIFFIS: 4 Q. Okay. And it is true, right? DNA 5 damage is not a mutation? 6 MS. WAGSTAFF: Object to the form. 7 A. DNA damage is -- can lead to a mutation. 8 BY MR. GRIFFIS: 9 Q. And in order for DNA damage to lead to 10 cancer, it needs to cause a mutation, and that 11 mutation has to be one that affects the cell in a 12 way that leads to unchecked proliferation of 13 cells, correct? 14 MS. WAGSTAFF: Objection. This is 15 calling for expert testimony and not the 16 mechanism subgroup's about glyphosate. 17 A. So my direct responsibility was to do 18 the toxicokinetic evaluation. 19 BY MR. GRIFFIS: 20 Q. Yes, sir. And let me ask you about 21 that. There are -- in the IARC monograph, there 22 are multiple sections, correct? And multiple 23 sections that the working group -- that your 24 group, group 4, was responsible for collectively, 25 right?</p>

<p style="text-align: right;">Page 170</p> <p>1 A. Yes. So my section was specifically 2 toxicokinetics. I wasn't writing on any of the 10 3 key characteristics in terms of draft form. 4 Q. Yes, sir. 5 A. I wasn't responsible for that. 6 Q. So if we went through in detail the IARC 7 monograph and looked at -- I mean, for example, 8 there's a section that addresses genotoxicity, 9 right? 10 A. Uh-huh (affirmative response). 11 Q. And it has multiple studies -- multiple 12 tables, and those tables list multiple studies, 13 and there are summaries of what the study showed 14 or didn't show. 15 All of that is in there? 16 A. Correct. 17 Q. Would you be an appropriate person to 18 ask about the significance of those tables and the 19 evaluation of those tables and what it said in 20 those studies and the significance of those 21 studies to a finding of genotoxicity or not? 22 A. I have a background in DNA adduct 23 research as a graduate student and as a post doc. 24 So I -- yes. There are aspects that I would be 25 appropriate too -- it would be appropriate for me</p>	<p style="text-align: right;">Page 172</p> <p>1 the pharmacokinetic section, which you wrote in 2 the first instance, and the other sections of 3 group 4 in terms of what you know and can testify 4 to and give opinions about? 5 A. Right. So I wrote the drafts on the 6 toxicokinetics, the drafts that were started six 7 months before the meeting. That was my main 8 responsibility. I was at the meeting as this 9 evidence is being presented, the genotoxicity 10 evidence and the oxidative stress evidence. 11 And as a peer reviewer, as a 12 scientist peer reviewer, we are asked to evaluate 13 those studies and decide whether they are strong 14 evidence, moderate, or weak evidence. So we are 15 peer reviewing in that process the data that's 16 being presented and the arguments that are being 17 presented. 18 Q. For example, with regard to glyphosate 19 and the multiple studies that were cited in tables 20 4.1, 4.2, 4.3, 4.4, 4.5 of the monograph and 21 subject to genotoxicity, did you read all those 22 studies? 23 A. I did not. 24 Q. Okay. Did you read many of those 25 studies?</p>
<p style="text-align: right;">Page 171</p> <p>1 to evaluate as a group -- as a mechanism subgroup. 2 Q. And let me be clear. I wasn't asking 3 whether you'd be qualified to review those 4 studies. I'm sure you would. 5 My question is whether, as you sit 6 here today, based on the knowledge in your head 7 and the work that you did in working group 112, 8 you would be qualified to answer detailed 9 questions about those studies, about the tables, 10 about the significance of the studies to working 11 group 112's evaluation of genotoxicity? 12 A. Well, it's -- it's -- it was a long time 13 ago. Now, I am familiar with the evaluation, and 14 it's in the monograph. 15 Q. Okay. 16 A. So I -- uh-huh (affirmative response). 17 Q. Okay. Well, I asked the questions about 18 the layout of the monograph and your expertise 19 because you said, look, I was in charge of 20 pharmacokinetic sections. So would you explain to 21 us the distinction between the pharmacokinetics 22 section which you wrote in the first instance 23 and -- I'll wait for your mic to go back. 24 Okay. Would you explain to us the 25 distinction that you were trying to make between</p>	<p style="text-align: right;">Page 173</p> <p>1 A. We had points -- you know, there were 2 leads on each of those sections -- on 3 genotoxicity, for example -- 4 Q. Yes, sir. 5 A. -- who were responsible for evaluating 6 those studies and writing summaries about what 7 that data meant. 8 Q. Sure. And they presumably read them 9 all, but you did not? 10 A. Yes. We did not have time. 11 Q. Okay. And you didn't have time because 12 you weren't just looking at genotoxicity. You 13 were looking other bins, and you were looking at 14 four other chemicals? 15 A. There was a lot of data. 16 Q. Correct. 17 On the oxidative stress section, 18 that's where you did a peer review before you 19 came, and you testified that you spent about a day 20 and a half of total work on the peer review, 21 including writing up the comment, which took a 22 day. 23 Did you read all of those studies? 24 A. Some of the studies where I wanted to 25 understand the method that was used to measure</p>

1 oxidative stress, I looked at those papers.

2 Q. So you pulled some of the papers to look  
3 up the methodology --

4 A. I was interested in that.

5 Q. -- in those papers, and, otherwise, you  
6 didn't read the oxidative stress studies unless  
7 cited?

8 A. I did not read every single study that  
9 was cited.

10 Q. Did you read many of the oxidative  
11 stress studies in entirety?

12 A. I can't put a number on it.

13 Q. Okay. As to the other characteristics,  
14 the other 10 characteristics -- and I won't list  
15 them all here -- did you read the studies cited by  
16 working group 112?

17 A. For the other -- for receptor mediated  
18 and so forth?

19 Q. Receptor mediated, et cetera?

20 A. Those studies -- those characteristics  
21 weren't considered strong, so less -- less weight  
22 was put on them.

23 Q. It's even less likely that you would  
24 have read them; is that right?

25 A. Yes.

1 MS. WAGSTAFF: Object to form.  
2 BY MR. GRIFFIS:

3 Q. Okay. On Page 20, sir. Well, first of  
4 all, let's go to Page 18. And the Smith article  
5 has a header here on Page 18. "Using the key  
6 characteristics to systematically identify,  
7 organize, and summarize mechanisms of  
8 information." Then there's a step one and on  
9 subsequent pages, step two and step three. And  
10 this is the methodology that was presented to you  
11 by Kathryn Guyton that the working group followed?

12 MS. WAGSTAFF: Object to the form.

13 A. I don't know if she presented it in  
14 exact same detail as here.

15 BY MR. GRIFFIS:

16 Q. Do you want to take a minute to read  
17 three steps and see if this is the procedure that  
18 you followed?

19 A. So one issue is I wasn't binning the --  
20 I wasn't tagging this information for glyphosate.  
21 I mean, the toxicokinetics --

22 Q. I'm sorry. When I say the procedure you  
23 followed, I meant working group 112, not you  
24 personally as to every aspect of it.

25 A. In general, yes. We used we used HAWC

1 to tag studies. I think, in general, yeah, this  
2 is -- it's fair. To help us compile the relevant  
3 information.

4 Q. Under step 3, the first sentence is  
5 says, "It is increasingly evident" -- under step  
6 3, the first sentence, "It is increasingly evident  
7 that multiple biological alterations or sets of  
8 different perturbations are necessary to convert a  
9 normal cell to a transformed cell and ultimately a  
10 tumor."

11 Did I read that right?

12 A. Correct.

13 MS. WAGSTAFF: Can you tell me where  
14 you're reading from?

15 MR. GRIFFIS: Yes, sir. Step 3 on Page  
16 20?

17 MS. WAGSTAFF: Oh, first sentence.

18 MR. GRIFFIS: Yes, ma'am. First  
19 sentence.

20 BY MR. GRIFFIS:

21 Q. So a -- an insult, like a genotoxic  
22 insult causes DNA damage. More things need to  
23 happen in a cascade of events before that will  
24 produce a tumor and produce a cancer.

25 Is that fair?

1 MS. WAGSTAFF: Objection. Calls for  
2 expert opinion. This has nothing to do with  
3 how monograph -- a subgroup of the mechanism  
4 came to a conclusion of glyphosate, whether  
5 or not he believes that.

6 A. So I'm not a cancer biologist.

7 BY MR. GRIFFIS:

8 Q. Yes, sir.

9 A. It is out of my expertise, but there are  
10 several steps that have to take place. And that's  
11 cited by Hanahan & Weinberg. That was the article  
12 I was referring to. Multiple -- there's -- there  
13 are multiple steps in cancer.

14 Q. That's the article from Cell that you  
15 were referring to earlier?

16 A. Yeah. Yeah.

17 Q. Thank you.

18 Well, as someone who had -- who is  
19 on the mechanism subgroup, did you understand  
20 yourself to be trying to identify mechanisms by  
21 which glyphosate could actually produce cancer in  
22 human beings?

23 A. So the 10 key characteristics are what's  
24 known -- human carcinogens, human cancers that are  
25 formed by carcinogens like tobacco smoke, they

1 have usually two or more of these key  
2 characteristics. They go through a mechanisms  
3 that includes at least two or more of those key  
4 characteristics to cause tumors.

5 And so we were trying to use those  
6 key characteristics to evaluate the glyphosate  
7 database. We were trying to compile the data  
8 within those key characteristics to see where the  
9 strength of the evidence lay.

10 Q. And did you consider it to be part of  
11 what you were doing to figure out if the  
12 mechanisms you were looking at could actually  
13 induce that chain of events that could lead  
14 hypothetically to human cancer?

15 MS. WAGSTAFF: Objection. Your question  
16 just says hypothetically. And now you're  
17 again asking about the risk assessment and  
18 back-dooring an expert opinion. And I do not  
19 think this is an appropriate scope to ask  
20 about risk.

21 A. So it -- of course, if we could identify  
22 mechanisms, that would be important in any  
23 evaluation in terms of how a compound causes  
24 cancer.  
25

1 terms of genotoxicity was that the mechanism was  
2 operable in human cells. Mechanism -- the key  
3 characteristic of genotoxicity, actual damage to  
4 the nucleic acids. So that was deemed to be  
5 operable in humans and human cells in vitro.

6 Q. Yes, sir.

7 And did you also reach any  
8 conclusions about whether the mechanism then led  
9 to the next step in carcinogenesis or whether it  
10 may have stopped there?

11 A. We had strong evidence for genotoxicity  
12 and for oxidative stress.

13 Q. Okay. Do you understand what I'm asking  
14 you, sir?

15 A. I think I do, but I -- I don't --

16 Q. Okay.

17 A. I'm just telling you what we have.

18 Q. Yes, sir. I do. I understand what you  
19 have.

20 So you agree with me that there are  
21 potential insults to DNA on one side that would  
22 include oxidative stress and the genotoxicity  
23 findings that were set forth in the monograph.  
24 And then in order for actual human cancers to be  
25 created, there would need to be a series of

1 BY MR. GRIFFIS:

2 Q. Yes, sir. Did you understand it to  
3 be -- from the briefings that you got about the  
4 methodology that you were to follow, the  
5 methodology set forth in the preamble, et cetera,  
6 that it was part of what you were there to do --  
7 you being all of working group 112, not  
8 necessarily you personally -- to figure out how  
9 these mechanisms could actually lead to cancer in  
10 human beings or if they did?

11 MS. WAGSTAFF: Same objection.

12 A. We were charged with determining whether  
13 there was evidence in the glyphosate database --  
14 the publicly available database that it had  
15 aspects of these 10 key characteristics, was --  
16 what was the strength of evidence for those 10 key  
17 characteristics.

18 BY MR. GRIFFIS:

19 Q. And did group 4 take the next step of  
20 linking up what you found with regard to the 10  
21 key characteristics, the two that were strong with  
22 regard to glyphosate to any additional steps in  
23 the chain between DNA insult and on one end of the  
24 chain and cancer on the other end of the chain?  
25

A. So what we identified in subgroup 4 in

1 additional events, like mutations, for example.  
2 Like mutations.

3 And my question is, did the  
4 mechanism group or any other group you know of as  
5 part of working group 112 find any of those  
6 additional steps occurring -- find that the  
7 mechanisms actually produced any of the additional  
8 steps -- caused mutations, caused mutations that  
9 lasted, caused mutations that weren't repaired,  
10 caused mutations that were relevant to produce  
11 cancer, led to cancer?

12 MS. WAGSTAFF: Objection. You're asking  
13 the same question that the attorney -- that  
14 Attorney White told him not to respond to  
15 earlier, and that is an expert opinion on the  
16 risk assessment. And when you said probably  
17 15 times, have you ever found that it caused  
18 it in humans, and he -- and right before the  
19 end. And now you've just rephrased your  
20 question, and you're asking it again. I  
21 think that's inappropriate, and I object.

22 BY MR. GRIFFIS:

23 Q. And to be clear, sir, what I'm asking  
24 you is whether IARC or whether the mechanism group  
25 or anyone else at IARC that you know of followed

<p style="text-align: right;">Page 182</p> <p>1 the chain of evidence that you see and found any 2 further than identifying the initial insult to 3 DNA. 4 MS. WAGSTAFF: Same objection. 5 A. So there are -- there is definite 6 evidence of damage to DNA, chromosomal 7 aberrations, micronuclei that indicate damage to 8 the nucleic acids. And that's in the tables. 9 Those are in the tables. 10 And that's -- that's as far as -- 11 we -- we -- if it was there, if there was linkages 12 further down the line, we would have tried to look 13 for that. Obviously, those 10 key characteristics 14 are all points along that progression from the 15 initial insult to actual tumor. These 10 key 16 characteristics involved those steps. So we are 17 looking for those steps. We are trying to make 18 the linkage. 19 BY MR. GRIFFIS: 20 Q. Okay. And you found two? 21 A. We found two key characteristics of -- 22 and those are genotoxicity and oxidative stress. 23 Q. Do you know of studies have been done 24 looking at whether the actual presence of some of 25 10 key characteristics matches up with actual</p>	<p style="text-align: right;">Page 184</p> <p>1 working group 112, subgroup 4, either found that 2 it doesn't appear to be applicable at all or found 3 that the evidence was weak, which is the lowest 4 classification you could give it, correct? 5 And that's -- shall I run through 6 them? 7 A. The ten key characteristics -- or the 8 other eight? Sure. 9 Q. Other than genotox and oxidative stress, 10 found -- 11 A. The others -- 12 Q. -- no evidence or weak -- 13 A. Or moderate. Maybe there was moderate. 14 I don't remember. One of the key characteristics 15 may have been labeled moderate, but I can't -- I 16 don't recall exactly. 17 Q. We can -- I can point you to where it 18 is -- each one is in the monograph if you would 19 like. They're all no evidence or weak. 20 Act as an electrophile, altered DNA 21 repair causing dynamic instability. That's two so 22 far. Induce genetic alterations, chronic 23 inflammation, immunosuppressive, modulate receptor 24 mediated effects, immortalization, alter cell 25 proliferation, cell death, nutrient supply.</p>
<p style="text-align: right;">Page 183</p> <p>1 carcinogenicity in multiple substances? 2 MS. WAGSTAFF: Objection to scope. 3 A. So there's -- what I understand is in 4 group -- there are some group chemicals that 5 exhibit at least two of the 10 key 6 characteristics. 7 BY MR. GRIFFIS: 8 Q. And do you know whether large 9 statistical analyses have been done matching up 10 positive findings and the 10 key characteristics 11 with whether a substance is a known carcinogen and 12 finding that there is or is not a relationship 13 between those two things? 14 MS. WAGSTAFF: Object to the form. 15 A. I haven't done that analyses. 16 BY MR. GRIFFIS: 17 Q. Okay. Do you know of anyone -- 18 A. Analysis. I don't -- I can't recall. I 19 don't know that. I know it's -- yeah. There's 20 some data out there, but I'm not aware of it, 21 exactly what it is -- where it is. 22 Q. Okay. As to the other eight 23 characteristics -- and I'll run through them 24 quickly just so you can remember what they are. 25 And here's my question. As to other eight, IARC</p>	<p style="text-align: right;">Page 185</p> <p>1 A. Okay. 2 Q. So weak or no evidence as to those? 3 A. I will have to look at the monograph. 4 I -- I don't remember -- 5 Q. All right. 6 A. -- specifically those because our focus 7 was on oxidative stress and genotoxicity. 8 (Exhibit No. 13-19 marked for 9 identification.) 10 BY MR. GRIFFIS: 11 Q. Exhibit 19 is the monograph, sir. And 12 if you'll turn to Page 77. 13 A. Okay. 14 Q. Left-hand column, the tiniest paragraph 15 in the column. "Glyphosate is not electrophilic." 16 A. Yes. 17 Q. Okay. Next one, "Altered DNA 18 repairs/cause genomic instability"? 19 A. Okay. Where is this? 20 Q. On 73. 21 A. Page 73. 22 MS. WAGSTAFF: Where on Page 73? 23 Q. 4.2.5, other mechanisms. We can take 24 out several of them here. "No data on 25 immortalization or genetic alteration, altered DNA</p>



1 repair, or instability after exposure to  
2 glyphosate were available to the working group."

3 A. Okay.

4 MS. WAGSTAFF: Object to the form. It  
5 says were available.

6 BY MR. GRIFFIS:

7 Q. Working group found no evidence on  
8 those; is that right?

9 A. There -- well, no data available to  
10 examine those.

11 Q. Page 78. Weak evidence is at the top of  
12 the first column. "Weak evidence that glyphosate  
13 or glyphosate based formulations induced receptor  
14 mediated effects."

15 A. Okay. Yes.

16 Q. Weak evidence, next -- start of the next  
17 paragraph, "Weak evidence that glyphosate may  
18 effect cell proliferation or death." Next  
19 paragraph, "Weak evidence that glyphosate may  
20 affect the immune system, both the human and  
21 cellular response."

22 Next paragraph, "With regard to the  
23 other key characteristics of being a carcinogen,  
24 the working group considered that the data were  
25 too few for an evaluation to be made.

1 A. Yes.

2 Q. So do you agree with me that, other than  
3 genotoxic and oxidative stress, as to the 10 key  
4 mechanisms, the working group either found no  
5 evidence or found the evidence to be weak?

6 MS. WAGSTAFF: Objection. Misstates the  
7 record. I think you read that there was no  
8 data available in a few of those.

9 A. There was no data available to evaluate  
10 some of these key characteristics, or if there  
11 was, it was deemed to be weak evidence.

12 BY MR. GRIFFIS:

13 Q. Okay. You didn't have --

14 A. On the other key -- on those other  
15 eight. Either the data wasn't there or if there  
16 was data, it was deemed not to operate through  
17 that mechanism.

18 Q. And you did what you considered to be a  
19 comprehensive search to find any data that  
20 existed, right?

21 A. It was a -- yeah. Yes. Absolutely.  
22 (Exhibit No. 13-20 marked for  
23 identification.)

24 BY MR. GRIFFIS:

25 Q. Okay. Exhibit 20.

1 MS. WAGSTAFF: Uh-huh (affirmative  
2 response).

3 BY MR. GRIFFIS:

4 Q. Sir, this is another document that you  
5 provided to us or that you provided to your lawyer  
6 and they provided to us perhaps. 112 mono 4 --  
7 that's working group 112, monograph 4, mechanistic  
8 evidence summary.

9 And the first section is  
10 toxicokinetics; is that right?

11 A. Correct.

12 Q. Is the toxicokinetics section here  
13 something that you prepared?

14 A. I would have had prepared this, yes, as  
15 a summary of the -- of the section.

16 Q. Okay. So this is a document that you  
17 created summarizing the toxicokinetic information  
18 that you were finding?

19 A. Yes. This would have been the high  
20 points to highlight.

21 Q. All right. And you created this when?

22 A. This would have been created -- we  
23 created these summaries at the meeting.

24 Q. Okay. Key characteristics  
25 electrophilicity, glyphosate is not electrophilic.

1 We just found that in the monograph  
2 itself, right?

3 A. Correct.

4 Q. Okay. And genotoxicity -- and you wrote  
5 in, "In vivo evidence on genotoxicity of  
6 glyphosate largely" --

7 A. Can I clarify one point?

8 Q. Yes, sir.

9 A. I summarized the toxicokinetics. These  
10 key characteristics were -- I didn't -- I didn't  
11 make this part of the summary. I just -- whoever  
12 and I -- I just provided the toxicokinetic  
13 bullets.

14 Q. Okay. Who made the key characteristics  
15 section?

16 A. I don't recall. I don't recall. It  
17 may -- one of the -- one of the five of us who was  
18 on that subgroup.

19 Q. All right. It was sort of created at  
20 the -- at the working group 112 while you were in  
21 Lyon by someone in your group but not you?

22 A. Correct.

23 Q. Genotoxicity. It says, "In vivo  
24 evidence on genotoxicity of glyphosate is largely  
25 inconsistent in studies in rodents, and no

1 conclusions can be drawn from human studies due to  
2 mixed exposures to pesticides and other  
3 chemicals," correct?

4 A. That's what it says.

5 Q. Okay. "In vitro data in human and  
6 animal cells contain some evidence of genotoxicity  
7 of glyphosate and AMPA; however, a number of  
8 studies failed to observe evidence of  
9 genotoxicity."

10 I read that right?

11 A. Yes.

12 Q. "Positive studies for glyphosate, AMPA,  
13 and commercial formulations for glyphosate are  
14 available in a variety of plants, fish, and other  
15 marine organisms."

16 I read that right, correct?

17 A. Uh-huh (affirmative response). Yes.

18 Q. And then, "The majority of standard AIMS  
19 test bacterial strains were not affected by  
20 glyphosate or AMPA even in presence of metabolic  
21 activation," right?

22 A. Correct.

23 Q. Would you explain to the jury how an  
24 AIMS test works and what the role of metabolic  
25 activation is in an AIMS test?

1 A. So an AIMS test is a mutagenicity assay  
2 in which bacteria -- salmonella bacteria are  
3 exposed to the chemical of interest and whether  
4 there are DNA damage -- DNA damage that results in  
5 mutations resulting. The addition of the  
6 metabolic activation system is often used to  
7 bioactivate the chemical in question to a DNA  
8 reactive molecule.

9 Q. So this is a test that looks a step or  
10 two down the chain that we've been talking about  
11 from DNA damage on one end to actual mutations,  
12 and it finds whether there are mutations, both in  
13 the presence of the chemical being metabolized and  
14 not metabolized, right?

15 A. Yes. It's a mutagenicity assay using a  
16 prokaryotic organism, not a mammalian cell. A  
17 bacterial cell.

18 Q. And it's universally used by regulatory  
19 agencies as a critical cancer screening tool; is  
20 that right?

21 A. It is widely used.

22 Q. Okay. Do you know of anyone who doesn't  
23 use it?

24 MS. WAGSTAFF: Objection.

25 A. I don't know.

1 BY MR. GRIFFIS:

2 Q. Okay. All right. Now, during your  
3 discussions with group 4 -- subgroup 4, tell me  
4 what you discussed about the in vivo evidence on  
5 genotoxicity of glyphosate being inconsistent in  
6 studies in rodents.

7 What was inconsistent about the in  
8 vivo evidence on genotoxicity?

9 A. I don't -- this could -- this is an  
10 earlier draft. I don't recall what was considered  
11 inconsistent about it. There are tables with  
12 information on the in vivo evidence of  
13 genotoxicity in some rodent species. So I don't  
14 recall what was considered inconsistent about the  
15 studies.

16 Q. And do you consider that the group's  
17 opinion as to whether the studies were  
18 inconsistent changed over time?

19 A. There -- there was more evaluation  
20 occurring during the meeting.

21 Q. Did the --

22 A. There was more evaluation of the -- of  
23 the data.

24 Q. Did the group's opinion that the in vivo  
25 evidence on genotoxicity was largely inconsistent

1 in studies in rodents change?

2 A. It became stronger.

3 MS. WAGSTAFF: Object to summation.  
4 BY MR. GRIFFIS:

5 Q. And what caused it to become stronger  
6 specifically?

7 A. So I don't know specific information  
8 about -- about this, but I know we were in the  
9 meeting. We're evaluating the data at the  
10 meeting. We're debating the data. It's not  
11 locked. It's not carved in stone when we get to  
12 Lyon. There's a debate that goes on, a peer  
13 review that goes on throughout the week. So  
14 things change. Things are in flux. This is --  
15 there's scientific debate.

16 Q. Okay.

17 A. I -- so that -- it's whatever is in the  
18 final monograph is the final evaluation.

19 Q. And is it fair to say -- you know, and I  
20 understand that we're here to question you as a  
21 fact witness and what you remember, not  
22 necessarily what the other members of the group  
23 remember, sir.

24 But is it fair to say that what you  
25 remember is that the group's conclusion at some

1 point was that in vivo evidence on genotoxicity of  
 2 glyphosate was largely inconsistent in studies in  
 3 rodents. Over time, the opinion strengthened in  
 4 favor of more consistency, and you don't remember  
 5 specifically why?

6 MS. WAGSTAFF: I'm going to throw an  
 7 objection in there as to foundation. That  
 8 was the group's opinion. Dr. Ross testified  
 9 he didn't write this and is not sure who  
 10 wrote this. This could be the opinion of one  
 11 scientist and not the entire subgroup.

12 A. So what you've got here, what you were  
 13 able to get was before the peer review of the  
 14 group. So we were charged with writing summaries,  
 15 and further analyses would have taken place,  
 16 debate. I do -- I do think I can say that the  
 17 strength of the evidence of genotoxicity in  
 18 nonhuman mammalian systems strengthened over the  
 19 week.

20 BY MR. GRIFFIS:

21 Q. Well, the person who was in charge of  
 22 drafting the genotox section was Frank LeCurieux  
 23 as we've established, right?

24 A. I'm -- yes. I'm pretty certain about  
 25 that.

1 Q. So was this Dr. LeCurieux's initial  
 2 view, or was it the view of the group after some  
 3 discussion at some point during the process?

4 A. I don't know who wrote this key  
 5 characteristics section at this -- you know, I  
 6 don't know who wrote it. Whether it was Dr.  
 7 LeCurieux, I'm not sure.

8 Q. There was nobody who was tasked with  
 9 writing all of these sections, correct?

10 A. The summaries?

11 Q. Yes, sir.

12 A. I was tasked with summarizing the  
 13 toxicokinetics for each compound for each of these  
 14 summaries.

15 Q. My point is that there was nobody who  
 16 was tasked with writing a electrophilicity and  
 17 genotoxicity and altered repair genomic  
 18 instability and chronic inflammation or oxidative  
 19 stress and receptor mediated and proliferation or  
 20 death and immunosuppression and epigenetic effect  
 21 and immortalization. This would have to be --

22 A. I don't know if it was done as a group  
 23 or one individual person did each of these key  
 24 characteristics. I -- again, because of my focus  
 25 on toxicokinetics, I don't know the answer.

1 Q. In the initial drafting assignments,  
 2 there was no one person who was in charge of all  
 3 of that?

4 A. So --

5 Q. So this isn't somebody's first draft?

6 A. Well, this is someone's first draft of  
 7 the summary.

8 Q. Of the summary after the group came  
 9 together and talked, right?

10 MS. WAGSTAFF: Objection. Foundation.

11 A. This -- well, these were -- these were  
 12 being drafted at the meeting.

13 BY MR. GRIFFIS:

14 Q. Could this be a summary of all of the  
 15 first drafts?

16 A. It's possible. I don't really know. I  
 17 don't know at what stage this was being -- at  
 18 which stage this is at.

19 Q. Okay. What was said, to your  
 20 recollection, about the position that no  
 21 conclusions can be drawn from human studies due to  
 22 mixed exposure pesticides and other chemicals with  
 23 regard to genotoxicity?

24 MS. WAGSTAFF: Objection to you're  
 25 asking questions, as Dr. Ross said he didn't

1 draft the key characteristics section of this  
 2 document.

3 A. I can't speak to what was meant -- what  
 4 was -- what this author was writing here because  
 5 it became clear that there were some important  
 6 studies in exposed humans that suggested or  
 7 indicated a genotoxic effect.

8 BY MR. GRIFFIS:

9 Q. You're talking about the exposed people  
 10 in Ecuador?

11 A. Columbia.

12 Q. Columbia. I got the border correct.

13 Those are the studies you mean,  
 14 though?

15 A. That's in table 4.1.

16 Q. 4.1. Those are the studies you mean,  
 17 not other ones?

18 A. I'm referring to Bolognesi.

19 Q. Okay. Now, but this was something that  
 20 was discussed in the group? This genotoxicity  
 21 stuff was discussed as the group's --

22 A. Yes.

23 Q. -- opinions evolved over time, right?

24 A. Yes.

25 Q. Okay. And so what I'm asking you is

1 what you recall the group discussing with regard  
2 to the position that no conclusions can be drawn  
3 from human studies due to mixed exposures to  
4 pesticides and other chemicals.

5 A. This is where --

6 MS. WAGSTAFF: Same objection.

7 A. -- I was so focused on the  
8 toxicokinetics that I don't know the specific  
9 details about that.

10 MR. GRIFFIS: Okay. Let's take five or  
11 ten minutes.

12 VIDEOGRAPHER: Off record at 3:00.

13 (A short recess was taken.)

14 VIDEOGRAPHER: Back on the record at  
15 3:08.

16 BY MR. GRIFFIS:

17 Q. Okay. Sir, before the break, we were  
18 talking about Exhibit 20 which says in the section  
19 entitled genotoxicity no conclusions can be drawn  
20 from human studies due to mixed exposures to  
21 pesticides and other chemicals.

22 And you talked about how the  
23 evidence -- how the views of the group changed  
24 over time based on human exposures, and you  
25 specifically cited the Bolognesi study to me,

1 correct?

2 MS. WAGSTAFF: I'm going to object on  
3 using that key characteristic because he said  
4 he didn't know who wrote it, and he didn't  
5 even know it was a group opinion.

6 A. Well, I can say that the -- the -- an  
7 important study was the Bolognesi study because it  
8 dealt with exposure to glyphosate both before --  
9 it indicated that there was evidence of  
10 genotoxicity being exposed to humans.

11 BY MR. GRIFFIS:

12 Q. In the monograph, sir, which I take it  
13 is 19, all right. Exhibit 19, monograph, Page 77.  
14 In looking at the right-hand column at the top,  
15 sir. The evidence for genotoxicity caused by  
16 glyphosate formulations is strong. And it says  
17 there was three studies of genotoxicity -- end  
18 points and community residents exposed to  
19 glyphosate based formulations, two of which  
20 reported positive associations, right?

21 A. Uh-huh (affirmative response).

22 Q. And those are the Bolognesi study -- the  
23 Bolognesi study and Tu Pas y Nino (phonetic)  
24 study; is that right?

25 A. Is that in table 4.1? Yeah.

1 Q. Yeah.

2 A. Pas y nino, yes.

3 Q. And it says that two of the three  
4 studies reported positive associations.

5 Do you recall discussing at  
6 subgroup 4 that the second pas y nino study --  
7 2011 study followed up on the first and found no  
8 lasting alterations?

9 A. It would have been discussed.

10 Q. Do you recall that discussion?

11 MS. WAGSTAFF: Objection. Foundation.

12 A. Sorry?

13 BY MR. GRIFFIS:

14 Q. Do you recall that discussion?

15 A. I don't.

16 Q. Okay. You don't recall that there was a  
17 first pas y nino study finding formation of some  
18 micronuclei that was associated with exposure to  
19 Roundup, and the second study looking for lasting  
20 damage found none?

21 MS. WAGSTAFF: Objection to foundation.

22 BY MR. GRIFFIS:

23 Q. Do you recall that?

24 A. I don't recall.

25 Q. Okay. We'll look at them then.

1 The one that you cited to me was  
2 the Bolognesi study, correct?

3 A. Yes.

4 Q. Okay.

5 (Exhibit No. 13-21 marked for  
6 identification.)

7 MS. WAGSTAFF: I would object to going  
8 through specifically articles in the fact  
9 that this was the subgroup's conclusion about  
10 glyphosate, and Dr. Ross is just one portion  
11 of that. He's sitting here in the context of  
12 a deposition. Asking him to go through  
13 scientific data I don't think was what was  
14 contemplated by the order.

15 BY MR. GRIFFIS:

16 Q. I'm sorry. Here you go, sir.

17 And when you cited to me before the  
18 break the Bolognesi study specifically as evidence  
19 of glyphosate causing genotoxicity damage in human  
20 beings, what was your -- what was the point of  
21 citing that work to me?

22 A. Because it showed in exposed humans --  
23 humans that were exposed to glyphosate based  
24 formulations, that the level of genotoxicity  
25 immediately following the exposure was greater

1 than baseline levels that were taken prior to the  
2 spray of the glyphosate based formulation.

3 So there was evidence in an exposed  
4 population of genotoxicity caused by the -- by the  
5 agent.

6 Q. And what was the significance of that to  
7 subgroup 4?

8 A. So -- because it's evidence in vivo that  
9 glyphosate may cause damage -- genetic damage to  
10 cells within an exposed population.

11 Q. And what was the importance of the  
12 Bolognesi study to subgroup 4 in its conclusion  
13 that there was strong evidence of genotoxicity?

14 MS. WAGSTAFF: Object to form.

15 A. Because looking at exposed populations  
16 to an agent and seeing evidence of DNA damage is  
17 strong evidence that it is occurring, that it can  
18 occur.

19 BY MR. GRIFFIS:

20 Q. So the Bolognesi was one of the strong  
21 pieces of evidence that you were relying on for  
22 your conclusions?

23 A. Not the only piece.

24 Q. Yes, sir. One of the strong pieces?

25 A. One of the -- one of -- one of the

1 4 came to its conclusions?

2 A. No, I did not.

3 Q. Okay. This was after you left Lyon?

4 A. Yes.

5 Q. Let's take a look at it.

6 All right. First of all, though,  
7 sir, do you know who in subgroup 4 did read and  
8 analyze this, other than obviously Dr. LeCurieux  
9 who drafted the genotoxicity section?

10 A. I believe that our subgroup chair read  
11 it.

12 Q. You believe Dr. Rusyn did, too?

13 A. Yes.

14 Q. Anyone else?

15 A. Not that I'm ware of.

16 MS. WAGSTAFF: Object to speculation.  
17 And I also object to questioning on this  
18 article. And I request that, if you're going  
19 to be asking him questions on this, that  
20 Dr. Ross take the time and read this article  
21 completely and refresh himself with it before  
22 questions are asked.

23 BY MR. GRIFFIS:

24 Q. I'm going to direct you to some --

25 MS. WAGSTAFF: And if you need to read

1 strong pieces of evidence.

2 Q. Was it the strongest?

3 A. I can't -- I'm not -- I can't say that.  
4 It -- there was a lot of weight on it because it's  
5 in an exposed population.

6 Q. Okay. Please --

7 A. In vivo -- in vivo, too.

8 Q. Please explain what -- okay. You said  
9 there's a lot of weight on it because, A, it's in  
10 an exposed population and, B, in vivo.

11 Would you explain to the jury the  
12 significance of those two points, please?

13 A. Because the mechanism may operate in  
14 humans. The mechanism of genotoxicity may be  
15 occurring in exposed populations.

16 Q. Okay. And why is that important to a  
17 finding of genotoxicity?

18 A. Because it's becomes the real world.  
19 It's a human population exposed to the agent, and  
20 these people had evidence of genotoxicity. So  
21 they're -- it's a real world situation.

22 Q. Did you read the Bolognesi study while  
23 you were at working group 112?

24 A. I have looked at it, yes.

25 Q. Okay. And did you do it before subgroup

1 the --

2 BY MR. GRIFFIS:

3 Q. Yes, sir. I was about to say that. If  
4 you need to read any other part of article other  
5 than where I direct you to answer a question,  
6 please feel free to do so. I'm going to start on  
7 Page 994, sir.

8 MS. WAGSTAFF: Dr. Ross, do you need to  
9 read the entire article?

10 THE WITNESS: I'm familiar with it.  
11 I -- if he -- if there's a specific question  
12 that I'll need time to analyze, then I'll let  
13 you know.

14 BY MR. GRIFFIS:

15 Q. Okay. This is part of the discussion  
16 section. The discussion section starts on 992,  
17 but I'm over on 994. The right-hand column, the  
18 third paragraph.

19 And it's talking about something  
20 called BNMN. For the court reporter --

21 A. BNMN. It stands for binucleated cells  
22 with micronuclei.

23 Q. And that's what they are measuring in  
24 this study, right?

25 A. Yes. One of the end points.

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1 Q. So the frequency of BNMN increased after  
 2 spraying with glyphosate, but not consistently,  
 3 correct?  
 4 A. Point to where you're -- which paragraph  
 5 now?  
 6 Q. The first sentence of the third  
 7 paragraph. Right-hand column.  
 8 A. Oh, right-hand column?  
 9 Q. Yes, sir. Sorry.  
 10 A. Okay. I see where you're at.  
 11 Q. The results of -- and it goes on to say,  
 12 "The results obtained with a second sampling  
 13 carried out immediately after the glyphosate  
 14 spraying showed a statistically significant  
 15 increase in frequency of BNMN in the three regions  
 16 where glyphosate was sprayed. However, this was  
 17 not consistent with the rates of application used  
 18 in the regions," correct?  
 19 A. Yes. And this was pointed out in the  
 20 monograph.  
 21 Q. And then the first sentence of the next  
 22 paragraph says, "There was no significant  
 23 association between self-reported direct contact  
 24 with eradication sprays and frequency of BNMN,"  
 25 correct?

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1 A. Yes. That's what it says.  
 2 Q. Okay. At the bottom of that same  
 3 paragraph, "Decreases in frequency of BNMN and the  
 4 recovery period after glyphosate spraying were not  
 5 consistent."  
 6 And it gives an example, correct?  
 7 A. And these points were brought up in the  
 8 monograph.  
 9 Q. The next sentence -- the first sentence  
 10 of the next paragraph says, "Overall, these  
 11 results suggest that genotoxic damage associated  
 12 with glyphosate spraying as evidenced by the MN  
 13 test is small and appears to be transient,"  
 14 correct?  
 15 A. This is a conclusion of these authors.  
 16 Q. And the authors concluded that -- the  
 17 authors observed that the changes that they saw  
 18 were transient, correct?  
 19 A. One of the communities still had -- one  
 20 of the communities had lower levels four months  
 21 after the spray compared to the four to five days'  
 22 spray. So there was evidence of genotoxicity  
 23 right after the spray, and four to five months  
 24 later, that genotoxicity had -- was not apparent.  
 25 Q. Now, when genotoxicity is repaired by

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1 the body, it's not leading to cancer, right?  
 2 A. What this paper suggested was there is  
 3 evidence that genotoxicity, in three or four  
 4 communities that were exposed to the glyphosate  
 5 based formulation -- that there was a statistical  
 6 increase in micronuclei immediately after the  
 7 spray.  
 8 And what was strong about the  
 9 study, in our opinion, was there were baseline  
 10 samples taken immediately before the spray, and  
 11 those same individuals were assayed four days  
 12 after the spray, and there was a statistical  
 13 increase in the micronuclei.  
 14 That was an important basis for  
 15 putting a strength -- a strength descriptor on  
 16 that -- on this particular study.  
 17 Q. In doing so, you were disagreeing with  
 18 the conclusions of the authors themselves,  
 19 correct?  
 20 MS. WAGSTAFF: Object to the form.  
 21 Argumentative.  
 22 A. We were -- in this -- you know, the  
 23 analysis that was being done by the major  
 24 participants who had reviewed this data was that  
 25 there was a statistical increase in the level of

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1 DNA damage.  
 2 BY MR. GRIFFIS:  
 3 Q. The authors --  
 4 A. This was considered to be strength -- a  
 5 strength to the study.  
 6 Q. What the authors said -- the authors of  
 7 the study said -- I'm on Page 995, the second  
 8 column, and the second sentence of the first full  
 9 paragraph.  
 10 "Based on the applicable Bradford  
 11 Hill guidelines, it is not possible to assign  
 12 causality to the increases in frequency of BNMN  
 13 observed in our study," correct?  
 14 MS. WAGSTAFF: Can you tell me where you  
 15 are?  
 16 MR. GRIFFIS: Page 995, right-hand  
 17 column, first full paragraph, second  
 18 sentence.  
 19 MS. WAGSTAFF: Okay. Got it.  
 20 BY MR. GRIFFIS:  
 21 Q. That's what they said, right?  
 22 A. Yes. That's what's here.  
 23 Q. "There's a smaller frequency of BNMN and  
 24 MOMN in the region of no pesticide use compared  
 25 with the regions where pesticides, including

1 glyphosate, were used, which is consistent with  
2 other reports in the literature. Although,  
3 temporality was satisfied in the increase in  
4 frequency of BNMN after spraying, this response  
5 did not show strength as it was not consistently  
6 correlated with the rate of application.

7 "Recovery was also inconsistent  
8 with decreases in frequency of BNMN in the areas  
9 or eradication spray, but not in the area where  
10 lower rates were applied on sugar cane," correct?

11 MS. WAGSTAFF: Are you asking if that's  
12 what it says?

13 BY MR. GRIFFIS:

14 Q. Yeah. That's what it says?

15 A. Yes.

16 Q. Correct?

17 And then second sentence in the  
18 last paragraph of the article, "The smaller number  
19 of subjects recruited in this study and small  
20 amount of information about the exposure precluded  
21 any conclusions," right?

22 A. So, yes, that's what it says. However,  
23 the subgroup found that there was a statistically  
24 significant increase in micronuclei immediately  
25 following the spray application in these

1 individuals.

2 Statistically significant meaning  
3 there's a higher number -- statistically  
4 significant increase in the level of genetic  
5 damage immediately following the spray. This  
6 was -- this was considered important.

7 Q. And all other causes of this in people  
8 who were living near the Columbia/Ecuador border  
9 being sprayed from planes with glyphosate  
10 formulations, many of which being sprayed due to  
11 coca eradication -- were those all ruled by the  
12 study?

13 MS. WAGSTAFF: Objection.  
14 Argumentative.

15 A. I don't -- I don't know. Again, my area  
16 of expertise on this sub -- subgroup was to do  
17 toxicokinetics analysis. I am just telling you  
18 the subgroup was presented with this information  
19 that there was greater levels of genetic damage;  
20 that it was due to the glyphosate formulation  
21 being sprayed; and it was increased immediately  
22 following the spray compared to baseline values in  
23 the same individuals.

24 So there was evidence there that --  
25 of genotoxicity that -- that was considered

1 strong.

2 BY MR. GRIFFIS:

3 Q. The two people in the group that  
4 actually read this -- that you know actually read  
5 this before the conclusions came out are Dr. Rusyn  
6 and the person who wrote the section, Frank  
7 LeCurieux. Correct?

8 MS. WAGSTAFF: Objection. I don't think  
9 he knows what everyone in the subgroup read.

10 A. Yeah. I don't know -- I don't know what  
11 else -- you know, I don't know about the other  
12 authors or the other participants. Whether they  
13 read it or not, I don't know.

14 BY MR. GRIFFIS:

15 Q. Okay. But --

16 A. But I know -- I do know that  
17 Mr. LeCurieux and Ivan would have read this.

18 Q. And did they say -- did you disclose in  
19 the IARC monograph that the authors of the paper  
20 didn't find there was any association?

21 MS. WAGSTAFF: Objection. The monograph  
22 speaks for itself.

23 A. Monographs -- it -- there's limitations  
24 that were described in the monograph.  
25

1 BY MR. GRIFFIS:

2 Q. Did the disagreement with the  
3 conclusions of the authors of the article -- was  
4 that disclosed in the monograph?

5 MS. WAGSTAFF: Objection. The monograph  
6 speaks for itself. Argumentative.

7 A. I don't know. I don't -- I don't know  
8 if it is or not.

9 BY MR. GRIFFIS:

10 Q. Okay. Do you know Dr. Solomon, one of  
11 the coauthors of the Bolognesi paper?

12 A. I don't know him.

13 Q. Okay. Do you know that he said in a  
14 letter to editor -- I'm sorry -- in an interview  
15 that IARC got his study completely wrong?

16 A. I don't know that.

17 Q. Okay. Did anyone tell you that he was  
18 quoted as saying, "They got this totally wrong.  
19 They said the study showed there was relationship.  
20 It's certainly a different conclusion than the one  
21 we came to"?

22 MS. WAGSTAFF: Objection. Dr. Ross just  
23 stated he didn't know.

24 A. About -- about his comments? I don't  
25 know about those comments.

1 BY MR. GRIFFIS:

2 Q. Have you followed the discussions in the  
3 scientific community about IARC's methodology and  
4 IARC's conclusions followed you leaving working  
5 group 112?

6 A. I am aware of press, yes, regarding --

7 Q. Not this specific one, but some other  
8 press?

9 A. I don't recall this -- seeing this.

10 Q. And what have you followed?

11 A. I have seen reports in the Morning  
12 Consult and New York Times.

13 Q. Anything else?

14 A. I have seen some stuff in Huffington  
15 Post and Genetic Literacy Project and Monsanto's  
16 website.

17 MS. WAGSTAFF: I'm going to object about  
18 questions regarding what he's seen in the  
19 press regarding the 112, when the entire  
20 alleged purpose of this deposition was the  
21 working group mechanism's decision-making  
22 process, and what has happened since then in  
23 the media is completely irrelevant. And I  
24 believe that Judge Charbriro would agree.  
25

1 BY MR. GRIFFIS:

2 Q. Have you been following those things  
3 yourself, or are these things that people e-mail  
4 you and you read when they happen to do that or  
5 what?

6 MS. WAGSTAFF: Same objection.

7 A. I've been familiar with it.

8 BY MR. GRIFFIS:

9 Q. Okay. Have any of the people -- and I'm  
10 talking about scientists who are commenting.

11 Have any of scientists who have  
12 commented in a critical way about IARC made any  
13 points that you considered to be useful or  
14 valuable critiques of the review that you did?

15 MS. WAGSTAFF: Objection. Once again,  
16 completely irrelevant and outside the scope  
17 of what the deposition allowed and requested.

18 A. I believe what we did was appropriate  
19 on -- based on the guidelines we were given in the  
20 preamble and -- yes. So I think what we did was  
21 appropriate. I can't comment beyond that.

22 BY MR. GRIFFIS:

23 Q. Okay. So you feel that you  
24 appropriately followed the guidelines that you  
25 were given?

1 A. Yes.

2 Q. Have you seen any criticisms of the  
3 guidelines that you were given you considered to  
4 be valid or fair?

5 A. No. I haven't -- no. I haven't seen  
6 criticisms of the guidelines we were given in the  
7 preamble that I felt were -- well, let me rephrase  
8 that. I haven't really seen criticisms of the  
9 guidelines.

10 Q. Okay. Fair enough.

11 Now oxidative stress. You said  
12 that you did a peer review of that section. It  
13 took about a day and a half of total time,  
14 including sending in the comments; is that right?

15 A. Yes.

16 Q. Okay. Now, without the oxidative stress  
17 findings, what would the mechanism group's  
18 recommendation have been?

19 MS. WAGSTAFF: Objection. That calls  
20 for speculation, and it's a hypothetical when  
21 the subgroup actually did find oxidative  
22 stress in its totality of the evidence type  
23 recommendation. And I don't think that  
24 anything -- any response would be anything  
25 more than speculation.

1 A. I'm not sure I understand the question.

2 BY MR. GRIFFIS:

3 Q. Yes, sir. I'm trying to understand how  
4 critical the oxidative stress findings were as  
5 compared to the genotoxicity findings in your  
6 conclusions that there was strong evidence that  
7 mechanisms existed by which glyphosate could cause  
8 cancer supporting, at one point, an upgrade which  
9 you didn't end up needing to advocate, et cetera.

10 How critical were the oxidative  
11 stress findings as compared to the genotox  
12 findings?

13 MS. WAGSTAFF: Again, I'll object to the  
14 fact that you're asking him to speculate on a  
15 hypothetical that never happened.

16 A. In terms of the 10 key characteristics,  
17 they were equally important.

18 BY MR. GRIFFIS:

19 Q. There's no hierarchy in the 10 key  
20 characteristics?

21 A. I'm not familiar with one.

22 Q. Okay. Are they considered all to be  
23 equal markers of carcinogenicity?

24 A. I don't think I am the one who can  
25 answer that.



1 Q. Is anyone in the mechanism group one who  
2 can answer that?

3 A. I think they are all given equal weight,  
4 in general. There's a -- yeah. I can't say  
5 there's one given more weight than the other.

6 Q. Okay. When you said, "I'm not the one  
7 to answer that," did you have someone in mind  
8 who --

9 A. No.

10 Q. -- would be better able to answer that?

11 A. I think a cancer biologist might be more  
12 appropriate to answer that specific question.  
13 We -- I looked at these 10 key characteristics as  
14 all being equal. We are trying to find the body  
15 of evidence that falls into each one of these key  
16 characteristics. What is the totality of the peer  
17 reviewed, published, openly available literature.  
18 So I don't think there's any bias in terms of one  
19 over another.

20 Q. Okay, sir. Tell me if this is right,  
21 then, that a cancer biologist may be better able  
22 to comment on the relevance of any particular one  
23 of the 10 key characteristics to formation of  
24 cancer.

25 Your mission was different. It was

1 MS. WAGSTAFF: Did you mark the  
2 Bolognesi as 21, or do you want to?

3 MR. GRIFFIS: I think so, yeah.

4 MS. WAGSTAFF: Okay. This will be 22.

5 MR. GRIFFIS: Yes.

6 MS. WAGSTAFF: I'm going to object to  
7 using the exhibit considering we can't read  
8 95 percent of it.

9 BY MR. GRIFFIS:

10 Q. Exhibit 22, sir, is an e-mail from Ivan  
11 Rusyn that you produced as part of your production  
12 to Lauren Zeise, Frank LeCurieux to you, and -- I  
13 can't read the last one.

14 MS. WAGSTAFF: Was it produced by --  
15 BY MR. GRIFFIS:

16 Q. What I want to ask you about is the big  
17 thing, not the little one. I mean, the rest of  
18 this that's very hard to read is primarily a list  
19 of assignments -- or recapitulation of the  
20 assignment list.

21 What I want to ask about is this  
22 large legible chart that Dr. Rusyn sent to members  
23 of the subgroup 4.

24 MS. WAGSTAFF: Object to foundation of  
25 this document.

1 to put the evidence into the bins and assess  
2 whether there was medium, moderate, or strong  
3 evidence with regard to each of the bins, correct?

4 MS. WAGSTAFF: Objection to form.

5 A. My job was to evaluate the toxicokinetic  
6 data on glyphosate.

7 BY MR. GRIFFIS:

8 Q. And group 4's job --

9 A. Group 4's job was to work on  
10 toxicokinetics, which I was primarily responsible  
11 for, and to evaluate the data -- the database on  
12 these 10 key characteristics.

13 Q. So group 4's mission was to put the  
14 evidence into the bins, into the ten categories,  
15 and assess within each bin whether it was weak,  
16 moderate, or strong evidence or we have no data in  
17 some cases, correct?

18 MS. WAGSTAFF: Object to the form. Use  
19 of the word "mission."

20 BY MR. GRIFFIS:

21 Q. Is that correct, sir?

22 A. Yes. Their -- yes.

23 Q. Okay.

24 (Exhibit No. 13-21 and Exhibit No. 13-22  
25 marked for identification.)

1 BY MR. GRIFFIS:

2 Q. With regard to mechanistic, do you see  
3 the three squares at the top -- three rectangles,  
4 cancer in humans, cancer in experimental animals,  
5 and mechanistic and other relevant data?

6 A. Yes.

7 Q. Okay. And with regard to mechanistic  
8 and other relevant data, which, of course, was the  
9 portion that your group was focused on, there are  
10 dotted lines blowing up some questions.  
11 "Identify, establish some likely mechanistic  
12 events." And then there's some questions relevant  
13 to that.

14 And, "Determine whether each  
15 mechanism could operate in humans," and there's a  
16 question for that.

17 Do you see that?

18 A. Uh-huh (affirmative response).

19 Q. Now, do you recall the purpose for which  
20 Dr. Rusyn sent this to you and the other members  
21 of group 4?

22 MS. WAGSTAFF: Object to using this  
23 document when you can't see the date. You  
24 can't see who sent it. You can't see who it  
25 was sent from.

1 And did Hollingsworth, LLP, blow this  
2 up, or was it produced --

3 MR. GRIFFIS: It was produced exactly  
4 like this. The smallness was exactly like  
5 this.

6 MS. WAGSTAFF: Okay.

7 MR. GRIFFIS: Dated February 10th, 2015.  
8 Sent to Zeise, LeCurieux, Ross, and my eyes  
9 fail me for the third.

10 MS. WAGSTAFF: I'll maintain my  
11 objection since we can't read this, but go  
12 ahead.

13 BY MR. GRIFFIS:

14 Q. Try to ask the question again?

15 A. Yeah. So...

16 Q. Yes, sir. There's three rectangles at  
17 the top -- cancer in humans, cancer in  
18 experimental animals, and mechanistic or other  
19 relevant data. You just said that that was -- of  
20 course, that was the area that group 4 was focused  
21 on.

22 And then there are these dotted  
23 lines that blow up some subpoints and questions  
24 relevant to mechanistic and other relevant data,  
25 right?

1 A. Correct.

2 Q. Okay. The question I asked was, do you  
3 recall the purpose for which Dr. Rusyn sent you  
4 and other members of the group this chart with  
5 questions?

6 A. This is before the meeting. We -- we  
7 were having a teleconference, I presume. And this  
8 was -- this is -- this looks like verbiage that  
9 comes from the preamble and how to address the  
10 mechanistic data.

11 Q. Okay. So you understood this to be some  
12 of the questions that you would be focused on  
13 originating in the preamble in doing your  
14 mechanistic analysis.

15 Is that fair?

16 A. That's what the preamble -- yes. It  
17 comes from the preamble.

18 Q. Okay. On the issue of -- I'm looking at  
19 the first -- first item. "Identify, establish  
20 likely mechanistic events" -- and the second  
21 question -- the second set of questions asked,  
22 "Has each mechanism been challenged  
23 experimentally? Does suppression of key  
24 mechanistic processes lead to suppression of tumor  
25 development," correct?

1 A. Yes.

2 Q. Okay. And do you know of any data  
3 looked at by working group -- working group 112 at  
4 all showing that suppression of genotoxicity or  
5 suppression of oxidative stress, the mechanistic  
6 processes that you identified, led to suppression  
7 of tumor development?

8 A. By which -- by glyphosate or glyphosate  
9 formulations?

10 Q. Yes, sir.

11 A. So to my knowledge, there are no  
12 evidence that suppressing those two would lead to  
13 suppression of tumor development. I am not aware  
14 of any studies that looked at that. We -- yeah.  
15 There are suppression of oxidative stress by the  
16 use of antioxidants when we looked at glyphosate.

17 Q. But those just looked at oxidative  
18 stress end points and not tumor development,  
19 right?

20 A. That's right.

21 (Exhibit No. 13-23 marked for  
22 identification.)

23 BY MR. GRIFFIS:

24 Q. Okay. Exhibit 23, sir. This is an  
25 e-mail chain involving Frank LeCurieux, yourself,

1 Kate Guyton, Matt Martin, and Lauren Zeise and  
2 Ivan Rusyn, correct?

3 A. Yes.

4 Q. Okay. Later adding in Andy Shapiro. I  
5 would like to focus first on Kathryn Guyton's  
6 March 13th, 2015 e-mail. Header of which is at  
7 the bottom of the first page, and the text appears  
8 on the second page.

9 Okay. Tell me when you're ready,  
10 sir.

11 A. Trying to get a timeline of the day  
12 here. Okay.

13 Q. Okay. So, again, I'd like to start out  
14 with Kathryn Guyton's March 13th, 2015 e-mail.  
15 The header is at the bottom of the first page, and  
16 the text is on the second page.

17 A. Okay.

18 Q. And she calls subgroup 4 the dream team  
19 and says those are Kurt's words -- Kurt Straif,  
20 correct?

21 A. Kurt Straif, yes.

22 Q. Kurt Straif called subgroup 4 the dream  
23 team?

24 A. That's what's written in this e-mail.

25 Q. Is that the first time you saw that?

1 A. I've seen this e-mail before.  
 2 Q. That's not quite what I meant.  
 3 Is this the first time you heard  
 4 group 4 be called the dream team when you saw this  
 5 e-mail?  
 6 A. Yes.  
 7 Q. Okay. She thanks you for your  
 8 contributions during the plenary session and then  
 9 says, "We were all impressed that Matt Martin was  
 10 able to quickly calculate P values for the CA  
 11 trend cut to aid interpretation of bioassay data."  
 12 I read that correctly?  
 13 A. Yes.  
 14 Q. Okay. And CA means Cochran Armitage?  
 15 A. Yes. I believe so.  
 16 Q. Okay. What --  
 17 A. I'm not a biostatistician, but I believe  
 18 that's right.  
 19 Q. All right. Now, what group was Matt  
 20 Martin in?  
 21 A. He was in subgroup 4.  
 22 Q. And what was the bioassay data? What is  
 23 that a reference to?  
 24 A. Could be one of the five compounds.  
 25 I -- I can't say with certainty which one it was.

1 Q. Well, it's talking about an animal  
 2 study, correct?  
 3 A. Well, it's talking about some animal --  
 4 Q. Animal carcinogenic study?  
 5 A. Yeah. Animal cancer bioassay. But the  
 6 specific compound...  
 7 MS. WAGSTAFF: Object to foundation of  
 8 this questioning. He's unsure if it's even  
 9 relating to glyphosate.  
 10 A. I don't -- I don't know if it relates  
 11 specifically to glyphosate or not in this context.  
 12 BY MR. GRIFFIS:  
 13 Q. Okay. First of all, let me ask you  
 14 this. Were you aware of Dr. Martin performing  
 15 calculations on animal group studies?  
 16 A. I was vaguely aware. There was some --  
 17 he does statistics. He was doing some work at the  
 18 meeting. I don't know the specifics of the  
 19 analyses or which compounds or which particular  
 20 animal bioassays were being examined.  
 21 I don't know the specifics because  
 22 my focus was so much on the toxicokinetics during  
 23 this stage of the meeting, that I don't know  
 24 which -- which bioassay he is referring to.  
 25 Q. Were you aware that, during working

1 group 112, a Cochran analysis bioassay was  
 2 recalculated with regard to glyphosate?  
 3 MS. WAGSTAFF: Objection. Foundation.  
 4 A. I -- I can't remember specifically if it  
 5 was for glyphosate. There were several compounds.  
 6 It's possible. It's possible.  
 7 BY MR. GRIFFIS:  
 8 Q. This is a slightly different question  
 9 than do you remember what Dr. Martin did. This is  
 10 specifically asking about glyphosate.  
 11 Do you recall that a Cochran  
 12 analysis bioassay calculation was performed with  
 13 regard to glyphosate during working group 112?  
 14 MS. WAGSTAFF: Objection. Foundation.  
 15 A. I can't -- with certainty, I can't  
 16 remember which one was being analyzed.  
 17 BY MR. GRIFFIS:  
 18 Q. Do you recall that that Cochran  
 19 analysis -- I'm sorry -- the Cochran Armitage  
 20 analysis done on a glyphosate bioassay resulted in  
 21 purported statistical significance where it had  
 22 not existed before?  
 23 MS. WAGSTAFF: Objection. Foundation.  
 24 A. I don't know the specifics of that.  
 25

1 BY MR. GRIFFIS:  
 2 Q. Is that something you recall from the  
 3 plenary sessions or from the other discussions  
 4 that you participated in or heard?  
 5 A. I wasn't in subgroup 3, so I -- I don't  
 6 know the specifics. I wasn't in their  
 7 conversations about the statistical tests.  
 8 Q. Other than Matt Martin and Christopher  
 9 Portier, who do you know who was performing  
 10 statistical analyses during working group 112?  
 11 MS. WAGSTAFF: Objection.  
 12 A. I don't even know if Chris Portier was.  
 13 I don't know.  
 14 BY MR. GRIFFIS:  
 15 Q. Do you not know that Chris Portier was?  
 16 A. I don't know.  
 17 Q. Okay. And you told us he was there as  
 18 the bio statistician. Correct?  
 19 MS. WAGSTAFF: Object to the form.  
 20 A. Yes.  
 21 BY MR. GRIFFIS:  
 22 Q. Did he spend time with groups other than  
 23 working group four? I'm sorry. Subgroup four?  
 24 A. I don't know if he spent time with them.  
 25 Q. Was he present at all subgroup four

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1 meetings?

2 A. Oh. I think there was one point he had

3 to step out. I don't remember which point.

4 Q. Okay.

5 A. There was a -- I can't -- he wasn't 100

6 percent there.

7 Q. Okay. One session he stepped out?

8 A. Yes.

9 Q. Okay. Other than that --

10 A. I recall that.

11 Q. Other than that, he was in all of your

12 meetings?

13 A. Other than that, yes.

14 Q. Okay. This document mentions IARC table

15 builder. Okay. Correct?

16 A. This e-mail?

17 Q. Yes.

18 A. Uh-huh (affirmative response).

19 Q. Okay. And do you know what the IARC

20 table builder is?

21 A. Yes. I didn't use it, but it -- it was

22 there to present data in the tables that you see

23 in the monograph.

24 Q. Okay.

25 A. But I didn't use it.

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1 Q. Was it connected to IOPS or HAWC or any

2 other particular system?

3 A. I believe it is in IOPS. Maybe in HAWC.

4 I don't think so. It was -- I think it was IOPSS.

5 Q. So in the IARC, the way it works, you

6 enter bioassay incidents data and it automatically

7 runs peer wise end trend analyses and presents

8 that data?

9 A. I don't know anything about that.

10 Q. Okay.

11 A. I don't know how it -- how that works.

12 Q. Do you know or would we have to ask

13 someone else, whether both peer wise and trend,

14 trend Cochran Armitage test are appropriate for

15 all bioassay incident data?

16 A. It is not my expertise area. I believe

17 both were used.

18 Q. Do you know whether they are used under

19 different circumstances, different sorts of data,

20 different rarities of end point et cetera or do

21 you not know?

22 A. I don't -- I don't know the details of

23 that. I'm not with the peer wising and trend, I

24 don't know when is the most appropriate to use. I

25 know in cancer bioassay data it is often used.

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1 Both types of tests.

2 Q. Okay. You don't know when to pick one

3 and when to pick the other --

4 A. That would be out of my area.

5 Q. That's fine. And to the first e-mail in

6 this document, the one from Katherine Guyton.

7 Frank LeCurieux is cc'ing you March 13th of 2015.

8 She is responding to a suggestion, Mr. LeCurieux,

9 to involve subgroup one and more analyses. That's

10 not the thing I want to focus on. She says a

11 great suggestion.

12 And she says, "Unfortunately, I

13 among other toxicologist don't understand the

14 epidemiologist and their exposure compadres.

15 However, I agree that their input, whatever it

16 meant on the Bolognesi study, which was critical

17 and in the end as valuable as, quote, sheep dip,

18 with a monkey face?"

19 Would you explain what is meant by

20 the input of the epidemiologist on the Bolognesi

21 study?

22 MS. WAGSTAFF: Objection. This calls

23 for speculation. Dr. Ross did not draft this

24 e-mail. Dr. Guyton drafted this e-mail and

25 asking him to opine on what she meant is pure

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1 speculation.

2 BY MR. GRIFFIS:

3 Q. I'm not asking you to opine on what she

4 meant, Doctor. I'm asking you what input the

5 epidemiologist had on the Bolognesi study during

6 the deliberation of the working group 112? Or is

7 this something that happened that you don't know

8 anything about?

9 MS. WAGSTAFF: Also, objection to the

10 fact that there were multiple Bolognesi

11 studies.

12 A. I don't recall what -- what is being

13 discussed regarding the epidemiologists. I could

14 only speculate.

15 BY MR. GRIFFIS:

16 Q. Whatever --

17 A. What they were talking about.

18 Confounders and so forth. So I -- it is not -- I

19 don't recall specifically this.

20 Q. There are two Bolognesi studies. One is

21 the one we've discussed previously in this

22 deposition about people being sprayed at the

23 Columbia Ecuador border, and the other is an

24 animal study. Right?

25 A. I don't know about the other. The only

1 one I'm -- I'm really familiar with is that in --  
2 the one we looked at earlier.

3 Q. Do you know about epidemiologist or  
4 exposure people being involved in giving critical  
5 input with regard to either of the Bolognesi  
6 studies?

7 A. They may have. I don't know the answer.  
8 How much input, I don't know.

9 Q. Okay. You don't know anything about  
10 that event or where it took place?

11 A. I don't remember any conversation about  
12 that. I can't recall it.

13 Q. Okay. Take a break.

14 VIDEOGRAPHER: Off the record at 3:56.

15 (A short recess was taken.)

16 VIDEOGRAPHER: Back on the record, 4:05.

17 BY MR. GRIFFIS:

18 Q. Okay. We made a little bit of a nest of  
19 documents I handed you. I'd like to talk to you  
20 briefly about Exhibit 3, which is the subpoena  
21 that we sent early in this process, asking you to  
22 produce some documents.

23 A. This is the one in September?

24 Q. Yeah. Sometime in that -- not in  
25 connection with this deposition. The one which

1 do you have multiple computers? Have a computer  
2 at home? A laptop --

3 A. Yeah.

4 Q. -- use?

5 A. I have my own laptop. And I also  
6 provided any -- a lot of it was redundant. I --  
7 but if there was any documents on my laptop, I  
8 also provided that as well.

9 Q. Okay. Let's first get the complete list  
10 of computers that you used.

11 A. So it was my work computer and a  
12 personal laptop.

13 Q. Do you have a computer at home?

14 A. No. No. Not my personal computer.

15 Q. Do you have a personal computer at home?

16 A. I'm sorry. My laptop --

17 Q. Okay.

18 A. -- might take -- that I use at home.

19 Q. Okay. The laptop serves as your home  
20 computer?

21 A. Yes. Yes.

22 Q. And you don't use any other computer or  
23 tablets or ...

24 A. No.

25 Q. -- anything? Devices of any sort?

1 you responded ultimately by sending us some  
2 documents. Would you tell us what you did. Don't  
3 tell me what your lawyers did, but tell us what  
4 you did to respond to that.

5 A. So I did searches of my work computer.  
6 Key word searches, I think, were IARC, glyphosate  
7 Monsanto.

8 I don't know the specifics. It was  
9 in the subpoena itself. But whatever was in the  
10 subpoena, I would do key word searches to make  
11 sure I could pull up all of the word docs, which  
12 several early drafts that we had -- I had -- I had  
13 drafted. That was the word docs on my work  
14 computer. I -- as you know, I had a spiral  
15 notebook that I kept notes with, and I looked for  
16 the notes from the meeting. And I made  
17 photocopies of it. Scanned it to the lawyers.  
18 Provided all of the word docs and provided it to  
19 the lawyers. And, yeah, I think so -- that's what  
20 I did. I scrubbed my computer for the -- you  
21 know, for what I needed to provide.

22 Q. Okay. I'm going to ask a series of  
23 questions to, you know, explore that a little bit  
24 and see if I can exhaust the process.

25 Do you work -- did you work on --

1 A. No.

2 Q. And you searched both your work computer  
3 and the laptop for the terms. Correct?

4 A. Right.

5 Q. Okay. In what program did you run those  
6 searches?

7 A. This is the search engine, this -- first  
8 of all, I knew where most of the documents were  
9 located, but to make sure I didn't have something  
10 in a folder I wasn't aware of, I used the search  
11 functionality on my laptop and on my work  
12 computer. Whatever that's -- that operating  
13 system is. I don't remember but -- what that is.

14 Q. It was the operating systems search --

15 A. Yeah.

16 Q. -- function, not Microsoft Word search  
17 function, is it?

18 A. Not Microsoft Word. The actual thing  
19 that will allow you to find any document that has,  
20 say, for example, IARC in the text.

21 Q. Right. Now, on the subject of PDFs, PDF  
22 don't always --

23 A. Yes.

24 Q. -- aren't always searchable.

25 A. I looked for PDFs as well.

1 Q. How did you look for PDFs that might not  
2 be searchable -- scan them or something?

3 A. I went through all and -- don't even  
4 know if we had any PDFs. I'm not sure. I can't  
5 remember for sure. But I looked for everything  
6 that was there in my PDF folder. I think there is  
7 ways in IARC I can -- you can use asterisks and  
8 dot PDF like asterisks IARC, asterisk dot PDF to  
9 do searches that would capture that.

10 Q. Yeah.

11 A. Capture those file.

12 Q. Some PDFs are intelligible enough to the  
13 computer that you can run word searches and some  
14 are not.

15 A. I --

16 Q. Okay. Did you -- what did you do about  
17 e-mail?

18 A. E-mail. So I looked but I think our IT  
19 guys were the ones capturing all of the e-mails  
20 that you have that -- that were -- that were  
21 responsive to the subpoena. So the IT guys were  
22 responsible for getting those.

23 Q. Other than any e-mail addresses that you  
24 might use exclusively for personal business, how  
25 many e-mail addresses do you have?

1 A. Oh. I have two e-mail addresses. One a  
2 personal and one a work.

3 Q. And do you send and receive work e-mails  
4 on the personal one for convenience ever?

5 A. No. The Yahoo one, I don't. I don't.  
6 I don't use it for work.

7 Q. And the work one, you ran some searches  
8 and found e-mails yourself. Did you provide those  
9 to your lawyers?

10 A. I'm trying to recall. I was told that  
11 IT will capture all of the e-mails. I don't  
12 recall actually handing over any e-mail hard copy  
13 of print outs.

14 Q. Okay.

15 A. Because I assumed IT would be more  
16 effective than I would be.

17 Q. And by IT, you mean IT here at MSU.  
18 Correct?

19 A. Yes.

20 Q. Okay. All right. Do you know what --  
21 did you give them the list of search terms? Or  
22 was it handled by someone else?

23 A. I think this is a -- it's pretty common  
24 that they would have the search terms under the  
25 subpoena that they would be looking for. And they

1 would go through that, but I'm not the IT guy  
2 so...

3 Q. Don't know?

4 A. Yeah.

5 Q. Okay. You talked about your notebook.  
6 And what you did for that. You took it and you  
7 found -- I take it you found relevant date range.

8 A. Uh-huh (affirmative response).

9 Q. And copied the pages within that range  
10 and sent them off to your lawyers. Correct?

11 A. Right.

12 Q. Do you recall any pages from that date  
13 range that I haven't shown you today?

14 A. I don't recall. I don't -- I don't  
15 recall. I think I captured -- captured the date  
16 range of the meeting. Yeah. So I don't think  
17 there was any other -- you may have something I  
18 can't remember photocopying, but I don't remember  
19 it.

20 Q. I don't have anything in mine.

21 A. Okay. I thought you had another  
22 surprise.

23 Q. No, sir. No more surprises, if there  
24 were any.

25 And paper files, paper documents,

1 do you have any other than the notebook pertaining  
2 in any way to IARC, glyphosate or Monsanto?

3 A. No.

4 Q. Okay. And do you have any -- way that  
5 you operate -- primarily electronically, do y'all  
6 print things out?

7 A. Primarily.

8 Q. Or do you print them and then throw  
9 away?

10 A. Well, there would have been some early  
11 drafts that I would have tossed in the recycle.  
12 Might have had a hard copy of it and I was  
13 reviewing it myself. I didn't discover -- I  
14 didn't find any hard copies to hand over.

15 (Exhibit No. 13-24 marked for  
16 identification.)

17 BY MR. GRIFFIS:

18 Q. Almost done here, sir. Exhibit 24.  
19 Okay. Exhibit 25.

20 (Exhibit No. 13-25 marked for  
21 identification.)

22 MS. WAGSTAFF: Objection. Beyond the  
23 scope of this document. It really has no  
24 bearing on the subgroups conclusion about  
25 glyphosate.

1 BY MR. GRIFFIS:

2 Q. Sir, exhibit 24 is an e-mail from  
3 Katherine Guyton to you and to other persons  
4 talking about the subpoenas that were issued by  
5 Monsanto seeking documents, the documents we've  
6 just been talking about. Correct, sir?

7 A. Yes.

8 Q. Okay. And when you received this, it  
9 was sent on April 1st of 2016, you saw that  
10 Ms. Guyton was telling you the position of IARC  
11 all draft documents and materials prepared by the  
12 working group in advance or during the in-person  
13 monograph group meeting are to be considered draft  
14 and deliberative. And she went on to say that  
15 IARC does not encourage participants to retain  
16 working drafts of documents after the related  
17 monograph has been published. Correct?

18 A. Yes.

19 VIDEOGRAPHER: Off the record.  
20 (A short recess was taken.)

21 VIDEOGRAPHER: Back on the record.

22 BY MR. GRIFFIS:

23 Q. Okay. Mr. White has said while we were  
24 off the record, that he believes that the e-mail  
25 was sent -- Exhibit 24 was sent in response to an

1 the above reasons IARC request you and your  
2 institute not to release any documents in your or  
3 your institute possession relating to your work in  
4 the capacity as a member of the working group."

5 Other than sending this on to your  
6 lawyers, did you do anything in response to this  
7 letter?

8 A. I provided this to the lawyers here at  
9 Mississippi State. That was -- that was my step.

10 Q. Now, at one point you were concerned  
11 about -- you were asked to participate in working  
12 group 117. Correct?

13 A. Correct.

14 Q. At one point you were concerned about  
15 doing so given the pendency of these document  
16 requests and your perception that handing over the  
17 documents would possibly put you at odds with IARC  
18 interests. Is that fair to say?

19 MS. WAGSTAFF: Objection to scope. This  
20 deposition is to explore the mechanism,  
21 group, subgroups, conclusion about  
22 glyphosate. And whether or not he had any  
23 reservation about participating in monograph  
24 117, which was years after 112 opinion is  
25 completely irrelevant and outside of scope.

1 open record request and not specifically that  
2 document production request.

3 But, when you received this, did he  
4 do anything about it?

5 A. Which e-mail?

6 Q. Exhibit 24. Yeah.

7 A. Let's see. Well, Mississippi State  
8 lawyers were involved at this point. So I was  
9 talking with the Mississippi State lawyers about  
10 what -- what I needed to do.

11 Q. Okay. Don't tell me what you said to  
12 them or what they said to you.

13 But I assume you sent this on to  
14 them?

15 A. Yes. Yes, I did.

16 Q. Did you delete any drafts or any other  
17 documents?

18 A. No.

19 Q. Exhibit 25 is a letter dated April 7th,  
20 six days later from another IARC officer to  
21 working group members talking about request for  
22 disclosure of documents that some members of the  
23 working group to include yourself, sir, had  
24 received.

25 And at the end it says, "For all of

1 BY MR. GRIFFIS:

2 Q. Go ahead.

3 A. So my concern was that I would be in a  
4 conflict of interest between IARC and Mississippi  
5 State, and therefore I felt that I should resign  
6 from volume 117.

7 Q. And Kate Guyton at IARC reassured you  
8 and said we don't view there being any conflict?  
9 Correct?

10 A. I had discussions with lawyers here at  
11 Mississippi State. Kate had discussions with  
12 lawyers at IARC that there was no conflict of  
13 interest to serve on volume 117.

14 Q. And you -- sorry. Go ahead.

15 A. Go ahead.

16 Q. Didn't mean to cut you off, sir.

17 And you were asked to serve as the  
18 chair of mechanism 117. Is this right?

19 A. I served as the subgroup chair for  
20 mechanisms, yes.

21 Q. Okay.

22 A. For volume 117.

23 Q. Okay. Do you recall writing to Kate  
24 Guyton, "I expect Ivan, our fearless leader, to be  
25 there. Dr. Rusyn is a tough act to follow."

1 A. Those -- yes, that is my e-mail.  
 2 Q. And what did you mean by that?  
 3 A. I have a lot of respect for Dr. Rusyn as  
 4 a scientist.  
 5 Q. What did you observe at working group  
 6 112. I assume that's what you were referring to  
 7 when you said, "Tough act to follow." Correct?  
 8 A. Yes. I --  
 9 Q. What did you observe Dr. Rusyn doing at  
 10 working group 112 that made you say that?  
 11 A. Extreme rigor. Very rigorous person --  
 12 scientist.  
 13 Q. What do you mean by rigor?  
 14 A. Evaluating the data objectively,  
 15 demanding evidence.  
 16 Q. Sir, I'm finished with my questions for  
 17 the time being. I'm going to reserve the rest of  
 18 my time to follow up with -- there's going to be  
 19 some questions from Ms. Wagstaff. I hope you  
 20 understand that I had a job to do and Monsanto had  
 21 a job to do in sending you those requests and  
 22 conducting this deposition. I hope you haven't  
 23 felt oppressed or harassed by me or my due process  
 24 any more than is absolutely necessary.  
 25 A. Everyone's got a job to do. I

1 A. Correct.  
 2 Q. We've never spoken on the phone together  
 3 before today. Correct?  
 4 A. Correct.  
 5 Q. We've never e-mailed before today.  
 6 Correct?  
 7 A. Correct.  
 8 Q. And, in fact, the first time I met you  
 9 was when you walked into this deposition room this  
 10 morning. Correct?  
 11 A. Yes.  
 12 Q. Okay. And Mr. Griffis showed you an  
 13 e-mail that my partner, my law partner Katherine  
 14 Forgie sent you, I believe, a couple of years ago.  
 15 Do you remember that this morning?  
 16 A. I don't remember what exhibit it was  
 17 but, yes. I remember the e-mail.  
 18 Q. Okay. And just to be clear, you've  
 19 never spoken with Ms. Forgie other than that  
 20 unilateral attempt to contact you. Correct?  
 21 A. Yeah. I've never spoken -- spoken with  
 22 Katherine Forgie.  
 23 Q. Okay. And we searched our law firm  
 24 e-mails for a response from you and didn't find  
 25 any. And that would be consistent with your

1 understand.  
 2 Q. Thank, you sir.  
 3 VIDEOGRAPHER: Break. Off the record.  
 4 (A short recess was taken.)  
 5 VIDEOGRAPHER: Back on record at 4:52.  
 6 EXAMINATION BY MS. WAGSTAFF:  
 7 Q. Good afternoon, Dr. Ross. My name is  
 8 Aimee Wagstaff, and I am an attorney who is  
 9 representing several plaintiffs who allege they  
 10 have been injured after a result to exposure to  
 11 glyphosate. Are you aware of that?  
 12 A. Yes.  
 13 Q. Okay. And so your deposition was first  
 14 noticed by Monsanto in the multi-district  
 15 litigation out of San Francisco and then we  
 16 cross-noticed that deposition. Are you aware of  
 17 that?  
 18 A. I knew it was in San Francisco, and I  
 19 think it's been consolidated. What I understand  
 20 the case has been consolidated. Is that --  
 21 Q. I mean, that's -- I'm just meaning are  
 22 you aware that we cross-noticed your deposition?  
 23 A. Yes.  
 24 Q. Okay. And you and I have never met  
 25 before today. Correct?

1 recollections to. Correct?  
 2 A. Yes.  
 3 Q. Okay. So and you haven't spoken with  
 4 anyone from the Miller Law Firm out of Virginia.  
 5 Correct?  
 6 A. No.  
 7 Q. Okay. And you haven't spoken anyone  
 8 from Weitz Luxenberg out of New York City.  
 9 Correct?  
 10 A. No.  
 11 Q. Okay. Excellent. So let's take a look  
 12 at your CV really quick, which has been marked as  
 13 Exhibit 4. And I'd just like to go over this real  
 14 quickly, if I could.  
 15 It looks like it was updated in May  
 16 of '17.  
 17 A. Yes.  
 18 Q. Okay. So this is -- this was provided  
 19 by your attorney a couple of days ago, so it's the  
 20 most updated CV that you have. Correct?  
 21 A. Right.  
 22 Q. Okay. And it looks like you've got a  
 23 Ph.D. from UC Irvine?  
 24 A. Correct.  
 25 Q. Correct. And a bachelor of science and



1 chemistry from Cal Berkley?

2 A. Correct.

3 Q. Is that correct? And then it looks like  
4 you've got -- that was in 1998 and 1989  
5 respectively. Correct?

6 A. Yes.

7 Q. And so if you backtrack your four years  
8 of college, my math may be off a little, but you  
9 started studying chemistry somewhere around 1985?

10 A. Yes.

11 Q. Okay. And to -- to today, which is  
12 in -- today is May 3rd, 2017, so you've been  
13 studying chemistry for about 32 years? Something  
14 like that?

15 A. Yes. Date me, yes.

16 Q. Not to date you. Okay. And it looks  
17 like you have -- starting with 1987, was your  
18 first sort of teaching assistant job at Cal  
19 Berkley as -- in the chemistry stock room teaching  
20 assistant. Is that correct?

21 A. Right. I worked as both. In the  
22 chemistry stock room and as a teaching assistant  
23 while an undergraduate.

24 Q. Okay. Great. So your first teaching  
25 job, if you will, in chemistry, was 30 years ago?

1 A. Yes.

2 Q. Okay. And then if you scroll down and  
3 it says, "Research FTE 70 percent," what does that  
4 mean?

5 A. FTE is a way we break out our research  
6 teaching and service at the University. FTE  
7 stands for full time equivalent.

8 Q. Okay. And so can I -- can I take that  
9 to mean that 70 percent of your time you are  
10 researching?

11 A. That's right.

12 Q. Okay. And then you've talked about  
13 your -- you list peer review publications and you  
14 split that up into publications since joining  
15 Mississippi State University and prior to joining  
16 Mississippi State University. Right?

17 A. Correct.

18 Q. And it looks like you've written three  
19 peer review publications since you joined the  
20 University. Right? Look at the bottom where your  
21 left hand is.

22 A. More than three since I've joined the  
23 University.

24 Q. Okay.

25 A. I had several since I joined the

1 A. Yeah.

2 Q. Okay. And that works all the way up to  
3 today where you are, it looks like, currently an  
4 associate professor at Mississippi State  
5 University. Correct?

6 A. Yes.

7 Q. Okay. And you were working the  
8 department of basic sciences and you were awarded  
9 tenure, looks like, in July of 2010. Is that  
10 right?

11 A. Correct.

12 Q. Okay. If you go to the next page. It  
13 looks like you've received a lot of awards.  
14 You've listed one, two, three, four, five, six,  
15 seven, eight, nine, ten, eleven, twelve, thirteen  
16 awards or honors that you've received in the field  
17 of advanced education and or chemistry. Is that  
18 correct?

19 A. Correct.

20 Q. Okay. The first one again being back in  
21 1986 and the most recent one was an award that you  
22 received in China in 2015?

23 A. Correct.

24 Q. Okay. And all of this is true and  
25 accurate and up to date. Right?

1 University. Several peer review public. It  
2 starts Page 7.

3 Q. Okay. So I was just confused because  
4 these three aren't numbered and then you start at  
5 64, so I didn't know. So you --

6 A. Those are -- so first one in  
7 preparation. So this is something we are about to  
8 submit. And the other two are currently under  
9 review. So they haven't been formally accepted.

10 Q. Okay. So it's fair to say, though, that  
11 you've written in 64 peer review articles?

12 A. Yes.

13 Q. Since you joined the University. Is  
14 that correct?

15 A. Yes. 64 minus 12. Yes. So...

16 Q. A lot?

17 A. Right.

18 Q. Regardless. Okay. And what's the  
19 significance of having a publication peer  
20 reviewed?

21 A. Oh. Peer review is important in terms  
22 of having independent scientist evaluate the data  
23 that you are trying to publish and determining  
24 whether the conclusions you draw are based on the  
25 data that's provided within the publication.

1 Q. Okay. And to be published -- well  
2 strike that.

3 So is it fair to say peer review is  
4 sort of a safety net to ensure that the integrity  
5 of the -- and the high quality of the literature?

6 A. Yes. A peer review is very important  
7 because you have anonymous reviewers -- your peers  
8 in your field reviewing the evidence, reviewing  
9 the data and determining whether the conclusions  
10 are sound, whether the methodology is -- is sound.  
11 And it's an important -- peer review is a critical  
12 aspect of the scientific enterprise.

13 Q. Okay. And generally speaking,  
14 non-published science is not peer reviewed. Is  
15 that correct?

16 A. Non-published science -- it -- well, to  
17 be peer reviewed, and to be accepted into a  
18 journal, you need that safeguard to evaluate the  
19 evidence. Non-published data, we -- no one  
20 ever --

21 Q. It is unknown?

22 A. -- it is unknown. It hasn't been peer  
23 reviewed. It may be out there, but it's not been  
24 peer reviewed.

25 Q. Okay. And then it looks like, if you

1 four pages of either current research projects or  
2 completed research projects in your CV. Is that  
3 correct?

4 A. Correct.

5 Q. And then presentations, and meeting  
6 abstracts, I counted up sixty-nine, if you totaled  
7 your presentations, your abstracts. Does that  
8 sound -- you don't have it numbered, but does that  
9 sound about right?

10 A. It sounds appropriate.

11 Q. Okay. And then you get to the Page 18  
12 of your CV. My CV is only one page by the way. I  
13 think I need to beef that up.

14 But you get to Page 18 and your  
15 professional development. And you've got one,  
16 two, three, four, five, six, seven, eight courses  
17 that you've taken to stay abreast of the current  
18 field that you are working in. Correct?

19 A. Correct.

20 Q. Okay. Active outside collaborators.  
21 I'm guessing those are people that you collaborate  
22 with that are outside of Mississippi State  
23 University?

24 A. That's right.

25 Q. Okay.

1 move on to your CV, you get to Page 8, you've  
2 written some book chapters, you've written some  
3 chapters for some books. Then you participated in  
4 two IARC monographs. Is that correct?

5 A. Correct.

6 Q. And we have talked about IARC 112, which  
7 is the monograph where IARC considered the  
8 carcinogenicity of glyphosate. Right?

9 A. Correct.

10 Q. And then one, looks like you also  
11 participated in IARC volume 117 after 112 that did  
12 not consider glyphosate. Correct?

13 A. Correct.

14 Q. Okay. And I also saw in one of your  
15 e-mails that you were invited to sit on the FIFRA  
16 scientific advisory panel board by the EPA. Is  
17 that correct?

18 A. Yes. I have served on a FIFRA panel  
19 2005 -- 2006 perhaps. It was on pirethroides. It  
20 wasn't glyphosate related.

21 Q. Okay. But that's an invitation from the  
22 EPA --

23 A. That was an invitation from the EPA.

24 Q. Okay. And then it looks like you have  
25 gone through -- you have one, two, three, four,

1 A. That's what I mean by that.

2 Q. And you've got that you collaborate with  
3 St. Jude's Children Research in Memphis,  
4 Tennessee. Correct?

5 A. Right.

6 Q. You collaborate actively with the  
7 College of Veterinary Medicine at the University  
8 of Georgia. Is that right?

9 A. Right.

10 Q. Okay. And then you also collaborate  
11 with Jing Xu Academy of Agricultural Sciences in  
12 China. Is that correct?

13 A. Right.

14 Q. Okay. And then we talk about -- then  
15 you talk about your -- the rest of your time,  
16 which I guess isn't necessarily the rest, but 15  
17 percent of your time is spent teaching. Is that  
18 right?

19 A. Right.

20 Q. Okay. And you've talked about all of  
21 the graduate courses that you have taught. You  
22 have taught a graduate course in the mechanisms of  
23 toxic action molecular toxicology. Is that  
24 correct?

25 A. Right.

1 Q. Okay. You've also taught in organ  
2 systems toxicology one and two. Is that correct?

3 A. Right.

4 Q. You've taught a course multiple times in  
5 the mechanisms of toxic action?

6 A. Yes.

7 Q. Correct. And you've taught a course  
8 called the current literature in toxicology. Is  
9 that right?

10 A. Right.

11 Q. Okay. You guest lectured in CVM  
12 graduate courses. What's CVM?

13 A. College of Veterinary Medicine.

14 Q. Okay. And you lectured -- you guest  
15 lectured on pharmacokinetic in a pharmacology  
16 course. Is that correct?

17 A. Right.

18 Q. And these were all -- these guest  
19 lectures were invitations from the regular  
20 professor. Right?

21 A. Right.

22 Q. Okay. And then if you turn to Page 20,  
23 and I won't go through the list, but it looks like  
24 you have student and post doctoral advisements on  
25 several students that -- through your time as a

1 A. Correct.

2 Q. And we've talked about that this  
3 morning. Is that correct?

4 A. Yes.

5 Q. In fact, you only went to one meeting --  
6 testified --

7 A. It was March 1st through 2nd of 2012.

8 Q. And then you have a list of the review  
9 editorial board that you sit on for journals.

10 And it looks like that there are --  
11 I didn't count those up but it looks like there  
12 are a lot of those that you sit on. Is that  
13 right?

14 A. Yeah. These are primarily as peer  
15 reviewer for all of these journals.

16 Q. Okay.

17 A. I am on the editorial board of journal  
18 called Toxics.

19 Q. Okay. So in parenthesis, does that mean  
20 how many times you've peer reviewed?

21 A. Yeah. That's -- yeah. That -- yeah.  
22 Roughly determines how many times I've reviewed  
23 for each of these journals.

24 Q. Okay. So I see numbers like one, four,  
25 two, sixteen, three, but if you add them all up, I

1 professor. Is that right?

2 A. Right.

3 Q. I would say a dozen or so. Does that  
4 sound right?

5 A. In that ballpark, yes. Yeah. Uh-huh  
6 (affirmative response).

7 Q. And then we get to your service, which  
8 is a -- on Page 21, which is 15 percent of your  
9 time as well. And we look at the external review  
10 panels that you've been on and you've been on one,  
11 two, three, four, five, six, seven, eight, nine  
12 external review panels. Does that sound right?

13 A. Yes.

14 Q. Okay. And some of those, it says, "That  
15 you're an invited member by the NIH study  
16 session." What is NIH?

17 A. Well, National Institutes of Health.

18 Q. Okay. And you were an invited member to  
19 sit on their external review panel when they  
20 looked at the systemic injury by environmental  
21 exposures. Is that right?

22 A. Correct.

23 Q. Okay. You were also an invited member  
24 of the Agricultural Health Study National Advisory  
25 panel in Maryland. Is that right?

1 mean, it looks like you peer reviewed 30 or 40  
2 times?

3 A. Oh, more than -- yeah, more than that.

4 Q. Fifty times maybe?

5 A. Yeah.

6 Q. You peer reviewed a lot of journals. Is  
7 that fair to say?

8 A. Yeah, that -- yeah. Yeah.

9 Q. Okay. And then you talk about your  
10 university service and your department and college  
11 service and your clinical diagnostic service and  
12 others. And then you give some references. Is  
13 that fair to say?

14 A. Yes.

15 Q. Okay. So after reviewing your CV, I  
16 think it's fair to say that you are very  
17 knowledgeable in molecular toxicology and probably  
18 considered an expert in your field?

19 MR. GRIFFIS: Objection to form.

20 Irrelevant.

21 BY MS. WAGSTAFF:

22 A. Yes, I've been invited by panels and to  
23 review papers and by NIH study sections.

24 Q. Okay. So we spent the first five and a  
25 half hours of the deposition this morning going

1 through piece by piece and pulling out of IARC  
2 monograph 112 and pulling out certain pieces and  
3 analyzing them in isolation. Is that fair?

4 MR. GRIFFIS: Object to the form.

5 A. We have looked at various exhibits.

6 BY MS. WAGSTAFF:

7 Q. Okay.

8 A. -- related to volume 112.

9 Q. But the bottom line is that the IARC 112  
10 determination was made by looking at the totality  
11 of the evidence. Is that fair?

12 A. Yes.

13 Q. Okay. And you would agree with me that  
14 there is not just one piece of evidence that drove  
15 that decision. Is that fair?

16 A. Correct.

17 Q. Okay. It was a totality of all of the  
18 evidence that was presented to the panel. Is that  
19 fair?

20 A. Correct.

21 Q. Okay. And you would agree with me, too,  
22 that the subgroup that you belonged to, which was  
23 the mechanism group for subgroup, also looked at  
24 the totality of the available evidence. Correct?

25 MR. GRIFFIS: Object to the form and

1 that.

2 So you would agree with me that  
3 when the subgroup four found strong evidence for  
4 genotoxicity and when subgroup four found strong  
5 evidence for oxidated stress, that subgroup four  
6 looked at the totality of the available  
7 evidence --

8 A. Yes.

9 Q. -- in making that determination?

10 MR. GRIFFIS: Object to the form.

11 Contrary to in regarding available evidence.

12 A. Yes.

13 BY MS. WAGSTAFF:

14 Q. And you would agree with me that the  
15 available evidence includes the evidence as  
16 allowed by the preamble of the mon -- of IARC's  
17 monograph. Correct?

18 A. Yes.

19 Q. Okay. And you would also agree with me  
20 that there wasn't one particular piece of evidence  
21 that drove either of those determinations.  
22 Correct?

23 A. For oxidative stress and genotoxicity,  
24 no. It's not one study that drives it.

25 Q. Okay.

1 contrary to the testimony.

2 A. Looked at the totality of the peer  
3 reviewed publicly available evidence for  
4 mechanisms and toxicokinetics.

5 BY MS. WAGSTAFF:

6 Q. Sure. So if you look -- so you would  
7 agree me then that subgroup four, in determining  
8 that there was a strong association, looked at the  
9 totality of the toxicokinetic evidence and also the  
10 totality of the evidence that was allowed to be  
11 looked at -- strike that. That was a horrible  
12 question.

13 So you would agree with me that  
14 work -- that subgroup four, in making its  
15 determination of a strong association, looked at  
16 the totality of the toxicologic evidence, as well  
17 as the published peer reviewed literature?

18 MR. GRIFFIS: Objection to form.

19 Contrary to prior testimony.

20 A. It would -- I wouldn't strong  
21 association it. There was strong evidence for  
22 genotoxicity. There was strong evidence for  
23 oxidated stress. Two of the ten characteristics.

24 BY MS. WAGSTAFF:

25 Q. You're. And I stand corrected by saying

1 A. It's the totality of -- the overall  
2 coherence of the data basis.

3 Q. Okay. Excellent. And in looking at the  
4 totality of the evidence, working group -- IARC  
5 working group 112 found that glyphosate was a  
6 category 2 A probable carcinogen. Correct?

7 A. Yes.

8 Q. Okay. And that was unanimous vote by  
9 all working members. Correct?

10 A. Yes, it was unanimous.

11 Q. Okay. And similarly, the subgroup fours  
12 vote to make a strong -- showing of strong  
13 evidence for genotoxicity and for oxidative stress  
14 was also unanimous. Correct?

15 A. Yes. With an IARC, yes, it was.

16 Q. Within your group?

17 A. Within our subgroup.

18 Q. And can you explain for the jury, sort  
19 of in laymen's term, what oxidative stress means?

20 A. Yes. So oxidative stress refers to  
21 molecules that have unpaired electrons that are  
22 highly reactive and that can damage cellular  
23 macromolecule, such as lipids, proteins and  
24 nucleic acids.

25 They are produced during normal

1 cellular respiration. We produce it under normal  
2 situations. And in a normal cell, it could be  
3 exacerbated by environmental chemicals.

4 Q. Okay.

5 A. That is made worse.

6 Q. Okay. Can you tell me how much money  
7 you made for participating in IARC 112 panel  
8 review?

9 A. Oh. We need we -- we were not paid for  
10 volume 112. We didn't get paid. We got per diem  
11 and we had travel.

12 Q. So you didn't make any money?

13 A. We don't make money.

14 Q. Okay. And have you made any money since  
15 on -- from your working on -- strike that.

16 Let's look at the preamble. I  
17 forget which exhibit it's marked. I think it  
18 might be 10. Going off memory though. Okay.

19 MR. WHITE: Yes.

20 BY MS. WAGSTAFF:

21 Q. We have spoken a lot today about  
22 classifications that certain subgroups have made  
23 whether it be limited or whether it be sufficient.  
24 And these are definitions that IARC has put into  
25 the preamble. And we never went over those

1 definitions, so I would like to just make sure  
2 that the jury understands what IARC means when  
3 something is labeled limited or sufficient.

4 So if you could turn please to  
5 page -- of the preamble, if you could, please,  
6 turn to Page 19. And this is a section called  
7 evaluation and rationale. Right?

8 A. Okay.

9 Q. Okay. So we're looking at A, which is  
10 the carcinogenicity in humans. Correct?

11 A. Yes.

12 Q. Okay. And when something -- and this is  
13 also referred to as the epidemiology group.  
14 Correct?

15 A. Correct.

16 Q. Okay. And when something is limited  
17 evidence, when the epidemiology group labels it  
18 limited evidence, do you -- are you following with  
19 me on this?

20 A. Uh-huh (affirmative response).

21 Q. The actual -- the subgroup actually  
22 finds a positive association between exposure to  
23 the agent of cancer for which a causal  
24 interpretation is considered by the working group  
25 to be credible. Did I read that correctly?

1 MR. GRIFFIS: Objection. Beyond scope  
2 of this deposition.

3 A. That is correct.

4 MS. WAGSTAFF: I cross-noticed this  
5 deposition, so I get to ask questions but --

6 MR. GRIFFIS: I'm not talking about my  
7 scope. I'm talking about the discovery  
8 scope.

9 BY MS. WAGSTAFF:

10 Q. Okay. So, in fact, when the  
11 epidemiology group identify -- or classifies  
12 something as limited evidence, they've actually  
13 found a positive association that they find  
14 credible. Is that fair?

15 MR. GRIFFIS: Objection. Beyond the  
16 scope of this deposition and beyond  
17 Dr. Ross's knowledge since only working in  
18 group four, he testified many times.

19 A. But this is what is in the IARC  
20 preamble.

21 BY MS. WAGSTAFF:

22 Q. So that's fair.

23 A. It's in the preamble.

24 Q. Okay. So then if you move on, and you  
25 if you look down to B, which is the

1 carcinogenicity in experimental animals. Right?  
2 So now we're in the animal subgroup. We're still  
3 on Page 20.

4 Oh, and just to be complete on --  
5 let me go back up. To be complete on the limited  
6 evidence in the epidemiology group, the definition  
7 is written in the preamble is a positive  
8 association has been observed between exposure to  
9 the agent, which in this case is glyphosate, and  
10 cancer for which a causal interpretation is  
11 considered by the working group to be credible,  
12 but chance bias or confounding could not be ruled  
13 out with reasonable confidence.

14 Did I read that correctly?

15 MR. GRIFFIS: Objection. Beyond the  
16 designated scope set by Judge Charbriro,  
17 beyond this witness' knowledge given his  
18 prior testimony.

19 A. That's what written.

20 BY MS. WAGSTAFF:

21 Q. Did I read that -- okay?

22 A. That is correct. It is written in the  
23 preamble.

24 Q. Okay. Excellent. And so if you move  
25 down to B where you look at the carcinogenicity in

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1 experimental animals, in fact, working group 112  
 2 labeled it sufficient evidence. Is that correct?  
 3 That was the final determination by the animal  
 4 group?  
 5 A. Sufficient evidence.  
 6 Q. Okay.  
 7 A. Yes.  
 8 Q. And so can you read into the jury  
 9 what -- what that means?  
 10 MR. GRIFFIS: Objection. Beyond the  
 11 scope of this deposition as found by Judge  
 12 Charbriro, beyond this witness' knowledge  
 13 given his prior testimony.  
 14 A. Well, you know for from.  
 15 BY MS. WAGSTAFF:  
 16 Q. Read it.  
 17 A. From the preamble, "The working group  
 18 considers that a causal relationship has been  
 19 established between the agent and an increased  
 20 incidents of malignant neoplasms or of an  
 21 appropriate combination of benign and malignant  
 22 neoplasms in A, two or more of species of animals  
 23 or, B, two or more independent studies in one  
 24 species carried out at different times or in  
 25 different laboratories or under different

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1 protocols." Should I read more?  
 2 Q. Nope. That's good.  
 3 And then if you look at -- there is  
 4 a lot of discussion this morning with Mr. Griffis  
 5 between the animal group determining whether to  
 6 call it limited evidence or sufficient evidence.  
 7 Do you remember that?  
 8 A. Yes.  
 9 Q. Testimony. Okay. So see let's look and  
 10 see what definition means of limited evidence by  
 11 the animal group. Okay. If you could please read  
 12 that into the record on Page 21.  
 13 MR. GRIFFIS: Same objection as  
 14 previously regarding scope. And this  
 15 witness' testimony, he wasn't involved in any  
 16 of those working groups. Three -- subgroup  
 17 3, also, just reading, a document speaks for  
 18 itself.  
 19 BY MS. WAGSTAFF:  
 20 Q. Go ahead.  
 21 A. So this is from the preamble. "The data  
 22 suggests a carcinogenic effect" --  
 23 Q. Okay. Hang on real quick. So limited  
 24 evidence of carcinogenicity by the animal group  
 25 still means that the data suggests a carcinogenic

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1 effect. Right?  
 2 MR. GRIFFIS: Objection --  
 3 BY MS. WAGSTAFF:  
 4 Q. Keep going.  
 5 A. "But are limited for making a definitive  
 6 evaluation because, A, the evidence of  
 7 carcinogenicity is restricted to a similar  
 8 experiment; B, there are unresolved questions  
 9 regarding the adequacy of the design conduct or  
 10 interpretation of the studies; C, the agent  
 11 increases the incidents only of benign neoplasms  
 12 or lesions of uncertain neoplasm potential or, D,  
 13 the evidence of carcinogenicity is restricted to  
 14 studies that demonstrate only promoting activity  
 15 in a narrow range of issues or organs.  
 16 Q. Okay. Excellent. You can put the  
 17 preamble away. I think am done with questions  
 18 about that for right now.  
 19 And I'd like to introduce as an  
 20 exhibit -- are we on 26?  
 21 (Exhibit No. 13-26 marked for  
 22 identification.)  
 23 Q. 26. Okay. The list of participants  
 24 that you have referenced numerous times this  
 25 morning. So this was the list of participants.

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1 Correct?  
 2 A. Yes.  
 3 Q. Okay. This was the entire list of  
 4 participants from the working group. Is that  
 5 right?  
 6 A. Yes.  
 7 Q. Okay. And there you are, about three  
 8 quarters of way down, Matthew K. Ross, Mississippi  
 9 State University, United States of America. Is  
 10 that right?  
 11 A. Correct.  
 12 Q. Okay. And if you go all the way down,  
 13 invited specialist, there's Dr. Christopher  
 14 Portier that we talked about numerous times today.  
 15 Right?  
 16 A. Yes.  
 17 Q. And then if you go all the way down to  
 18 the very bottom of the page, is Dr. Portier's  
 19 conflict -- potential conflict of interest  
 20 disclosure that you had referenced earlier today.  
 21 Right?  
 22 A. Yes.  
 23 Q. Okay. And if you turn the page --  
 24 actually before you turn the page, it looks like  
 25 within this -- this group, there's also a member

1 from the United States EPA, Matthew T. Martin. Is  
2 that correct?

3 A. Yes. He's one of the members.

4 Q. Okay. So is he doctor? Is it  
5 Dr. Martin?

6 A. Yes.

7 Q. Okay. So Dr. Martin was participating  
8 in monograph 112 as a member of the EPA. Is that  
9 correct?

10 MR. GRIFFIS: Object to the form.

11 False.

12 A. He was -- he was member of the subgroup  
13 four. He was -- he was -- he was an employee of  
14 U.S. EPA.

15 BY MS. WAGSTAFF:

16 Q. Let me strike that.

17 And so Matthew T. Martin, while he  
18 was participating in monograph 112, was an  
19 employee of the United States EPA. Is that  
20 correct?

21 MR. GRIFFIS: Object to the form.

22 A. Yes. He was an employee of U.S. EPA.

23 BY MS. WAGSTAFF:

24 Q. And here on this list of participants,  
25 Matthew T. Martin is listed as being associated in

1 excuse me -- to the next page, it looks like  
2 representatives of national and international  
3 health agencies are listed there as well. And  
4 then you have observers and it look -- if you look  
5 a few down, it looks like Thomas Sorahan was there  
6 for Monsanto Company. Is that correct?

7 A. Yes.

8 Q. Okay. So Monsanto had an observer there  
9 during the working group. Is that correct?

10 A. Yes.

11 Q. Okay. Do you know Mr. Sorahan?

12 A. I do not know him.

13 Q. Okay. It looks -- if you look down at  
14 number four, it looks like he had said that he is  
15 a member of the European glyphosate toxicology  
16 advisory panel and received reimbursement of  
17 travel cost from Monsanto to attend Eurotox 2012.  
18 Do you see that?

19 A. Yes.

20 Q. Okay. And he's listed as being  
21 associated with Monsanto company in this  
22 participant list. Is that correct?

23 A. As an observer.

24 Q. Okay. And did -- were you aware that he  
25 was reporting back to Monsanto throughout the

1 some way with the United States EPA. Is that  
2 correct?

3 A. Yes.

4 Q. Okay. And, in fact, Matthew T. Martin  
5 was part of the mechanism subgroup four that you  
6 are part of. Correct?

7 A. Correct.

8 Q. And that Matthew T. Martin, the United  
9 States EPA employee, was part of the subgroup that  
10 found a strong association with genotoxic and  
11 oxidative stress. Is that correct?

12 MR. GRIFFIS: Objection to the form.

13 The bold -- at the top says these people not  
14 serving in any way representative of their  
15 governmental organizational which they are  
16 affiliated.

17 BY MS. WAGSTAFF:

18 Q. Is that correct?

19 A. He was a member of subgroup four.

20 Q. And subgroup four was the subgroup that  
21 found that there is a strong evidence for  
22 genotoxicity and for oxidative stress of  
23 glyphosate. Is that correct?

24 A. Yes.

25 Q. Okay. And so if you turn the page --

1 course of the monograph working group?

2 MR. GRIFFIS: Objection. Foundation.

3 A. I wasn't aware of his communications.  
4 (Exhibit No. 13-27 marked for  
5 identification.)

6 BY MS. WAGSTAFF:

7 Q. Okay. So I'm going to hand you an  
8 e-mail which is marked confidential, but it has  
9 already been publicly disclosed, so you don't need  
10 to sign a protective order.

11 But if you look at the second page,  
12 do you know who Donna Farmer is? You go to the  
13 bottom of the cascade. Yeah. Okay.

14 A. Where is she from? She's a Monsanto  
15 employee. I don't know Donna Farmer.

16 Q. Well, you see that her e-mail is

17 [REDACTED] ?

18 A. Yes.

19 Q. That would suggest she is affiliated  
20 with an employee of Monsanto?

21 MR. GRIFFIS: Objection. Foundation.

22 Beyond the scope of this deposition as  
23 designated by Judge Charbri.

24 BY MS. WAGSTAFF:

25 Q. I will represent to you that she is a

1 Monsanto employee. Do you have any reason to  
 2 doubt that?  
 3 A. No.  
 4 Q. Okay. And so she is writing to Thomas  
 5 Sorahan, the Monsanto observer, the working group  
 6 112. Correct?  
 7 A. Yes.  
 8 Q. And this is on March 14th, which was a  
 9 couple of days after the -- if I recall correctly  
 10 the working group concluded on the tenth and/or  
 11 11th of March of 2015?  
 12 A. Tuesday -- I don't have the time line in  
 13 front of me. I think that's the 10th.  
 14 Q. Okay. And so she -- so -- so Dr. Farmer  
 15 asked Thomas Sorahan, as well with Christian  
 16 Strupp, Matt Jensen and Bill Heydens, about the  
 17 IARC findings at a CLA meeting on Thursday. And  
 18 if you look at -- this e-mail is from Thomas  
 19 Sorahan, if you look at the front page, when he is  
 20 writing back to her.  
 21 MR. GRIFFIS: Objection as to any  
 22 questions about this document. The witness  
 23 was not on the document in any way. He's  
 24 never seen it before. There's no foundation  
 25 for its relevance. And this is beyond the

1 scope that was set by Judge Charbriio.  
 2 BY MS. WAGSTAFF:  
 3 Q. Okay.  
 4 A. I need to read this.  
 5 Q. Sure.  
 6 A. I haven't had a chance to read this.  
 7 Q. No problem.  
 8 A. From Donna Farmer. Just let me...  
 9 Q. No problem. Okay.  
 10 A. Okay.  
 11 Q. Ready?  
 12 A. Yes.  
 13 Q. Okay. So it looks like Donna Farmer was  
 14 writing to some folks wondering why the  
 15 information was released about the 2 A  
 16 classification of glyphosate. Right?  
 17 MR. GRIFFIS: Objection. This is  
 18 utterly speculative. This is a document that  
 19 this witness has nothing to do with. He had  
 20 to read it the first time. So question --  
 21 these questions would be better directed to  
 22 Donna Farmer -- would have been deposed.  
 23 This is just an attempt to put into evidence  
 24 things that have nothing to do with this  
 25 witness. Beyond the scope set by the judge.

1 BY MS. WAGSTAFF:  
 2 Q. All right. And I don't necessarily care  
 3 about your answer to that question, so I can  
 4 strike it if you want.  
 5 MR. GRIFFIS: I'll have the same  
 6 objection to every question that you have  
 7 about this document which has nothing do  
 8 with --  
 9 MS. WAGSTAFF: I will tie it in. Don't  
 10 worry.  
 11 BY MS. WAGSTAFF:  
 12 Q. So we've talked about the methodology  
 13 of -- we spent the day talking about the  
 14 methodology of monograph 112, and Monsanto's  
 15 attorneys have done everything they possibly can  
 16 do to try to knock down the creditability of  
 17 monograph 112, so I'm tying this in to show what  
 18 one of Monsanto's own employees said about the  
 19 methodology of 112. And if you will let me finish  
 20 my questions, I will tie that in. So, if you --  
 21 MR. GRIFFIS: Objection. Argumentative.  
 22 Misrepresents the prior testimony.  
 23 Misrepresents the course of this deposition.  
 24 Demonstrates the improper use of the  
 25 document. Witness -- nothing to do with this

1 document.  
 2 BY MS. WAGSTAFF:  
 3 Q. Okay. So it looks like Tom Sorahan, who  
 4 was there as an observer for Monsanto, writes to  
 5 Dr. Farmer and says, in the second paragraph,  
 6 quote, "I know of -- I do know of instances where  
 7 observers at IARC felt they had been treated  
 8 rudely or briskly at monograph meetings. That was  
 9 not the case for me at volume 112. I found the  
 10 chair, subchairs and invited experts to be  
 11 friendly and prepared to respond all comments I  
 12 made." Do you see that?  
 13 A. Yes.  
 14 MR. GRIFFIS: Objection. Irrelevant --  
 15 BY MS. WAGSTAFF:  
 16 Q. Was that your experience --  
 17 MR. GRIFFIS: -- witness.  
 18 BY MS. WAGSTAFF:  
 19 Q. Was that your experience at monograph  
 20 112?  
 21 MR. GRIFFIS: Objection. Totally  
 22 irrelevant. He wasn't there as an observer.  
 23 A. So what the question is -- what's -- ask  
 24 me the question again.  
 25 BY MS. WAGSTAFF:



1 Q. Sure. The question is, did you feel  
2 that the chair and the subchairs and the invited  
3 experts were prepared to respond to all comments  
4 by the observers?

5 MR. GRIFFIS: Objection. No foundation.  
6 Observers -- or know how the observers were  
7 treated.

8 MR. WHITE: I will advise, Dr. Ross,  
9 again, that you only have to answer to the  
10 extent that you have actual knowledge.

11 A. I thought they were cordial.

12 BY MS. WAGSTAFF:

13 Q. Okay. And then if you look at the next  
14 paragraph, it says, "In my opinion, the meeting  
15 followed the IARC guidelines." Would you agree  
16 with that?

17 MR. GRIFFIS: Objection. This document  
18 is irrelevant to any issue that is relevant  
19 to the scope set by the judge. He's never  
20 seen it before. And it's not -- proper  
21 witnesses have already been deposed.

22 A. Yes. I felt the guidelines were  
23 followed.

24 BY MS. WAGSTAFF:

25 Q. Excellent. And then I'd actually like

1 Donna Farmer is -- on the toxicology or the  
2 product protection and nutrition lead for the  
3 toxicology nutrition center at Monsanto. You see  
4 that?

5 A. Yes.

6 Q. Okay. And so it looks like Donna  
7 Farmer, on February 3rd of 2015, is sending a list  
8 of material to the -- what was Dr. Guyton's role  
9 again? The --

10 A. She was the responsible officer for  
11 volume 112.

12 Q. Okay. So it looks like Dr. Farmer, on  
13 February 3rd, is actually sending material to the  
14 responsible officer of monograph 112 to be  
15 considered for the meeting. Is that -- and it  
16 looks like she is -- she is actually also sending  
17 it to an e-mail entitled monograph 112 at IARC.fr.  
18 Do you see that?

19 A. Yes.

20 Q. Okay. This was about -- about a month  
21 before the IARC met, the IARC committee members  
22 met in Lyon, France. Is that right?

23 A. Yes.

24 Q. Okay. And later that day, Dr. Guyton  
25 responds and says thank you for the information.

1 to pull out Exhibit 13 that Monsanto's attorney  
2 marked this morning, please. Okay.

3 All right. So this is an e-mail  
4 that Monsanto's marked as an exhibit to this  
5 deposition. So I'd like to actually walk through  
6 what -- the genesis of this e-mail. If you need  
7 to take a minute to look at it please, please do.  
8 Tell me when you are ready.

9 A. Okay.

10 Q. Okay. So please tell the ladies and  
11 gentlemen of the jury who Katherine Guyton is.

12 A. Dr. Guyton was the responsible officer  
13 employed by IARC for the meeting.

14 Q. Okay. And so it looks like on this  
15 cascade if you go to -- up in the very top left  
16 when it says 5039. Looks like the last couple of  
17 pages are just signature blocks. So this e-mail  
18 starts -- you know, e-mails are kind of funky  
19 because they go backwards.

20 But this e-mail cascade starts it  
21 looks like on February 3rd of 2015. Correct?

22 A. Yes.

23 Q. Okay. And it looks like Donna Farmer  
24 and here's actually you can see -- there's her  
25 signature line, so you can actually see now who

1 We will provide the appropriate scientific  
2 articles to the working group. Do you see that?

3 A. Yes.

4 Q. Okay. And then if you move to the next  
5 portion of the cascade, it looks like a few days  
6 later, Dr. Farmer from Monsanto again follows up  
7 with the -- Dr. Guyton from IARC and requests that  
8 confirmation that she received her e-mail and then  
9 she says, if you look at the bottom of the first  
10 paragraph, "I have also had a Kingston Flash drive  
11 with the zip files sent to you via FedEx  
12 international priority, which would be there  
13 typically in two business days." You see that?

14 A. Yes.

15 Q. Okay. So it looks like Monsanto was  
16 following up again and now they have priority  
17 two-day airmailed information and articles to IARC  
18 112. Is that right?

19 A. Yes.

20 Q. Okay. And so then if you -- then if you  
21 keep going, you look at February 26th, which is  
22 one day later, so three weeks later, Donna Farmer  
23 from Monsanto again is writing to Dr. Guyton and  
24 giving additional information for the monograph  
25 112. Is this correct?

<p style="text-align: right;">Page 286</p> <p>1 A. Yes.</p> <p>2 Q. So it's fair to say that Monsanto</p> <p>3 provided information to monograph 112 to be</p> <p>4 considered. Is that right?</p> <p>5 A. It appears that they were sending</p> <p>6 information to IARC.</p> <p>7 Q. Okay. And so if you look now -- this is</p> <p>8 where I'm going to start to bounce around a</p> <p>9 little. If you could look at the actual</p> <p>10 monograph, which I believe was -- I'm not sure --</p> <p>11 what exhibit number was that.</p> <p>12 MR. WHITE: 19.</p> <p>13 BY MS. WAGSTAFF:</p> <p>14 Q. 19. Okay. And if you turn to Page 46.</p> <p>15 (Exhibit No. 13-27 marked for</p> <p>16 identification.)</p> <p>17 BY MS. WAGSTAFF:</p> <p>18 Q. Okay. Are you on Page 46?</p> <p>19 A. Yes.</p> <p>20 Q. Okay. And this is actually -- I'm</p> <p>21 sorry. Turn to Page 45. This is where the IARC</p> <p>22 actually talks about the Bolognesi paper that you</p> <p>23 spent some time talking about with Monsanto's</p> <p>24 attorney. Do you remember that?</p> <p>25 A. Yes.</p>	<p style="text-align: right;">Page 288</p> <p>1 final documents. Is that correct? That's what</p> <p>2 we're reading, the final document. Right?</p> <p>3 A. Yes. This, yes.</p> <p>4 Q. So that information was considered in</p> <p>5 totality of the evidence in making the</p> <p>6 determination. Correct?</p> <p>7 A. The issue -- this was the -- the point</p> <p>8 that was raised earlier about micronucleus</p> <p>9 formation observed immediately after Spring was</p> <p>10 not consistent with the rate of application used</p> <p>11 in the regions. So this is the -- the issue that</p> <p>12 was brought up by the Monsanto attorney.</p> <p>13 Q. Right. And so --</p> <p>14 A. And I made the point that that</p> <p>15 information is in the monograph.</p> <p>16 Q. Excellent. So my question to you is --</p> <p>17 and so -- by -- this may seem sort of</p> <p>18 self-explanatory. But by virtue of it being in</p> <p>19 the monograph final published paper, that suggests</p> <p>20 that it was, in fact, considered in the totality</p> <p>21 of the evidence determination that both the</p> <p>22 subgroup four and monograph 112 made. Is that</p> <p>23 correct?</p> <p>24 A. Yes.</p> <p>25 Q. Okay. And then I'd like to -- okay.</p>
<p style="text-align: right;">Page 287</p> <p>1 Q. Okay. And now I just wanted to show</p> <p>2 you -- put into prospective where we were. You</p> <p>3 see Bolognesi, et al, 2009 in the right hand</p> <p>4 column of Page 45?</p> <p>5 A. Yes.</p> <p>6 Q. Okay. And that's a discussion in the</p> <p>7 IARC -- the final IARC manuscript about that paper</p> <p>8 that you had discussed. Correct?</p> <p>9 A. Yes.</p> <p>10 Q. So if you turn now to Page 46, I just</p> <p>11 wanted to -- just wanted to confirm that some of</p> <p>12 the language that Monsanto's attorney was reading</p> <p>13 to you about the Bolognesi paper did in fact make</p> <p>14 its way into the monograph 112 paper as it was</p> <p>15 considered within the final evaluation. And where</p> <p>16 I would point your direction -- point your</p> <p>17 attention to is where it says, "However, comma,</p> <p>18 the increased infrequency of micronucleus</p> <p>19 formation."</p> <p>20 And that is the language that you</p> <p>21 were discussing with Monsanto's attorney earlier.</p> <p>22 Correct?</p> <p>23 A. Yes.</p> <p>24 Q. Okay. So that information was</p> <p>25 considered and actually made it into the published</p>	<p style="text-align: right;">Page 289</p> <p>1 Okay. I'd like to --</p> <p>2 MS. WAGSTAFF: This is actually</p> <p>3 highlighted so I'm only going to give you</p> <p>4 guys one copy.</p> <p>5 BY MS. WAGSTAFF:</p> <p>6 Q. Okay. This is an article that is from</p> <p>7 Bolognesi in 2010. And if you turn to -- this was</p> <p>8 produced to us by Monsanto, which is why they are</p> <p>9 Bates labeled below. But if you turn to the end</p> <p>10 of the Bates labels being 294, last three -- 294.</p> <p>11 Okay.</p> <p>12 And on the left hand column, the</p> <p>13 end of the first paragraph, it says, "Results</p> <p>14 showed significant increase in MN frequency after</p> <p>15 glyphosate exposure, mainly when it is applied for</p> <p>16 maturation of sugar cane."</p> <p>17 A. I've just got to find where you are at</p> <p>18 here.</p> <p>19 Q. You want to look at -- where I</p> <p>20 highlighted, it will help.</p> <p>21 MR. GRIFFIS: Object. The question</p> <p>22 about this study which is not one that</p> <p>23 foundation -- been laid was considered by the</p> <p>24 witness or anyone else in connection with</p> <p>25 group four deliberations.</p>

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1 A. Let me just read through this.  
 2 MR. GRIFFIS: Calls for expert  
 3 testimony.  
 4 A. Let me just read this paragraph here.  
 5 BY MS. WAGSTAFF:  
 6 Q. Sure.  
 7 A. Okay. I've read it.  
 8 Q. All right. So do you see where it says,  
 9 "Results showed significant increases in MN  
 10 frequency after glyphosate exposure, comma, mainly  
 11 when it is applied for maturation of sugar cane."  
 12 Do you see that?  
 13 MR. GRIFFIS: Same objection. It is  
 14 beyond the scope set by Judge Charbriio.  
 15 Asking this witness to make comments, extra  
 16 testimony on study unrelated to the  
 17 glyphosate 112 monograph.  
 18 A. I see -- I see that.  
 19 BY MS. WAGSTAFF:  
 20 Q. Okay. And this is the same Bolognesi  
 21 who wrote the article in 2009. Correct?  
 22 MR. GRIFFIS: Same objection.  
 23 A. I believe so.  
 24 BY MS. WAGSTAFF:  
 25 Q. Okay. Put that aside.

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1 Do you know a Dr. Jim Perry?  
 2 A. No.  
 3 Q. Okay. Do you know if during the IARC  
 4 monograph 112 meeting that the panelists  
 5 considered Dr. Perry's report that he commissioned  
 6 for Monsanto?  
 7 MR. GRIFFIS: Objection. Irrelevant  
 8 beyond the scope of this deposition.  
 9 A. I am unfamiliar with the name and any  
 10 data he -- any report he was commissioned.  
 11 BY MS. WAGSTAFF:  
 12 Q. Okay. And so earlier today, Monsanto's  
 13 attorneys tried to whittle down the amount of time  
 14 that y'all spent on this monograph. And they were  
 15 trying to suggest that you spent 20 percent of a  
 16 week on the glyphosate monograph. Did you  
 17 remember that testimony?  
 18 MR. GRIFFIS: Object. Unfair  
 19 characterization -- Dr. Ross who said 20  
 20 percent.  
 21 A. I remember the testimony.  
 22 BY MS. WAGSTAFF:  
 23 Q. Okay. But this is all related to work  
 24 that you do every day. Correct?  
 25 MR. GRIFFIS: Objection. Vague.

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1 Q. I'll strike that.  
 2 A. Rephrase your question. In terms of  
 3 juggling acts?  
 4 BY MS. WAGSTAFF:  
 5 Q. No. I will rephrase. Okay.  
 6 An hour that you spend --  
 7 A. Yes.  
 8 Q. -- with your expertise, education wise  
 9 and experience is different than an hour that  
 10 someone without that expertise spends on this type  
 11 of work. Correct?  
 12 A. Yes. Yeah, it's fair to say.  
 13 Q. Okay. I don't have any advance degrees  
 14 in chemistry, toxicology or any of the things on  
 15 your CV. So I'm guessing that an hour that you  
 16 spend on that is way more productive than an hour  
 17 I spend on that. Is that correct?  
 18 MR. GRIFFIS: Objection. Vague.  
 19 A. I would, yes.  
 20 BY MS. WAGSTAFF:  
 21 Q. It's fair to say that.  
 22 Okay. I told you that we weren't  
 23 going to have any more questions on the preamble,  
 24 but I do have one more question. If you could  
 25 please pull that up. Which I believe is Exhibit

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1 10.  
 2 A. 10.  
 3 Q. 10.  
 4 A. Okay.  
 5 Q. Okay. Can you point to me the place in  
 6 the preamble where it says that the procedure that  
 7 the IARC members follow must be a procedure set  
 8 forth in a peer reviewed public literature? And  
 9 I'm not talking about the data that you -- that  
 10 you need to analyze.  
 11 I want to know where in the  
 12 preamble it says that the procedure followed must  
 13 be that within a published literature. And I will  
 14 submit to you that I don't think that it does say  
 15 that.  
 16 MR. GRIFFIS: Objection. Relevance.  
 17 A. Looking for peer reviewed public  
 18 literature?  
 19 BY MS. WAGSTAFF:  
 20 Q. No. I am -- so I know that the preamble  
 21 says that the IARC panelists must consider -- the  
 22 data it must consider must be published literature  
 23 available in the public domain. I know that. I'm  
 24 just wondering -- the procedure I'm actually  
 25 talking about, the ten factors that we talked

1 about that the mechanism group looked at.

2 Monsanto's attorney seemed to make  
3 a distinction that the procedure wasn't in  
4 published literature until after the monograph  
5 happened. So I'm wondering, is there anything in  
6 the preamble that requires your procedure to be in  
7 published data?

8 A. Okay. Right. I got you, what you're  
9 saying now.

10 Yeah. So in the -- in the  
11 preamble, under the mechanistic and other relevant  
12 data, section four, there's nothing in the  
13 preamble that states that examining the 10 key  
14 characteristics that that evaluation was  
15 published. There is nothing in there about that.

16 Q. Okay. And there's nothing in there that  
17 says that for procedures go, in any procedures --

18 A. As a procedural matter.

19 Q. Yeah. Okay. In fact, genotoxic and  
20 oxidated stress were known causes of cancer in the  
21 peer review literature prior to IARC. Right?

22 MR. GRIFFIS: Objection.

23 Mischaracterized the testimony.

24 BY MS. WAGSTAFF:

25 Q. Okay. Let me ask you -- let me restate

1 A. Yes.

2 Q. I mean to get up to become a member of  
3 an IARC panel, you must be an expert of some sort?

4 A. Yes.

5 MR. GRIFFIS: Objection. Beyond  
6 Dr. Ross's knowledge. Foundation.

7 BY MS. WAGSTAFF:

8 Q. And so -- and so it is absolutely  
9 appropriate, you would agree with me, that you  
10 rely on your comembers analyses of studies.

11 Correct?

12 A. Yes. That's very important.

13 Q. Right. I mean they didn't -- no one  
14 called up Dr. Ross and said, Dr. Ross, make this  
15 opinion all by yourself. Correct?

16 A. Right.

17 Q. Okay. And so it's very appropriate, you  
18 would agree, that you didn't read every single  
19 article, and, in fact, relied on your co-panelist,  
20 who are who co-experts in their analyses?

21 Correct?

22 A. Yes.

23 Q. There's nothing abnormal about that.

24 Correct?

25 A. No.

1 that. Prior to -- that was a bad question. Okay.

2 Prior to monograph 112, okay, so  
3 we're going right before that. The peer review  
4 literature recognized genotoxicity and oxidative  
5 stress as causes of cancer. Correct?

6 A. There were studies that indicated  
7 genotoxicity and oxidated stress by glyphosate --  
8 caused by glyphosate.

9 Q. Okay. Thanks. And as much as Monsanto  
10 tried this morning to make IARC 112 and subgroup 4  
11 the Dr. Ross show, it wasn't. It was a team  
12 effort. Right?

13 MR. GRIFFIS: Objection to the  
14 characterization. Misstates the whole day.

15 A. Yeah.

16 BY MS. WAGSTAFF:

17 Q. Mean your --

18 A. Yeah. I had -- my main focus in this  
19 monograph was to evaluate the toxicokinetic data  
20 for glyphosate and the other four compounds. It  
21 was to evaluate the toxicokinetic data and report  
22 on that and be a member of the subgroup four  
23 mechanistic, mechanisms subgroup.

24 Q. Okay. Excellent. And your co-subgroup  
25 members are experts in their own right. Correct?

1 Q. And that is, in fact, what you do in the  
2 scientific world in a setting like this. Correct?

3 A. Correct. Absolutely.

4 Q. Okay.

5 MS. WAGSTAFF: Let's take like a two or  
6 three minute break. I may be done. Real  
7 quick. I just want to talk with Jeff.

8 VIDEOGRAPHER: Off the record at 5:46.  
9 (A short recess was taken.)

10 (Exhibit No. 13-28 and Exhibit No. 13-29  
11 marked for identification.)

12 VIDEOGRAPHER: Back on record at 5:53.

13 BY MS. WAGSTAFF:

14 Q. All right. I'm going to try to wrap  
15 this up in just a few minutes.

16 Why did you participate? Why --  
17 strike that. Why did you agree to participate in  
18 monograph 112?

19 A. I have a lot of background in research  
20 experience in pesticide metabolism,  
21 pharmacokinetic, organophosphorus, pesticides in  
22 particular. So I felt I was -- I was well  
23 qualified to serve on the panel.

24 Q. And did you consider the invitation a  
25 prestigious invitation?

1 A. Yes.  
 2 Q. Okay. And would you agree with me that  
 3 scientific debate is a good thing?  
 4 A. Yes.  
 5 Q. Okay. I'm going to hand you as my  
 6 hopefully last exhibit of the day, a document that  
 7 Monsanto's attorney referenced this morning and it  
 8 may actually be an exhibit. I'm not sure if you  
 9 actually marked it as an exhibit.  
 10 I tucked under here -- can I have  
 11 one of those copies back? Sorry.  
 12 This is an article that was  
 13 published in a journal. Correct?  
 14 A. Yes.  
 15 Q. Okay. And it looks like it was -- there  
 16 are 94 authors of this article. Right?  
 17 A. Yes.  
 18 Q. And you are number -- you are in there.  
 19 A. Yep.  
 20 Q. You're number --  
 21 A. 68.  
 22 Q. 68th, correct? You're the 68th author.  
 23 And are you familiar with the contents of this  
 24 article?  
 25 A. Yes.

1 that was said today changed your mind on the  
 2 decision that monograph 112 panelist came to?  
 3 A. No.  
 4 Q. Okay. Thank you. No further questions.  
 5 VIDEOGRAPHER: Off record.  
 6 (A short recess was taken.)  
 7 VIDEOGRAPHER: Back on record.  
 8 EXAMINATION BY MR. GRIFFIS:  
 9 Q. Sir, thank you for your time today. I  
 10 have a few more questions on the subject of peer  
 11 review.  
 12 There's a difference in the field  
 13 of academic science, sort of science that you are  
 14 normally involved in between peer reviewed and  
 15 non-peer reviewed studies. Right?  
 16 A. There is a difference.  
 17 Q. The peer reviewed studies tend to be the  
 18 better studies because they are good enough that  
 19 they can be submitted to journals or good enough  
 20 that when your peers look at them, they give  
 21 sufficiently favorable reviews the journal would  
 22 publish them. Correct?  
 23 A. The peer reviews system acts as a  
 24 gatekeeper in a way. Quality control mechanism.  
 25 Q. And it's certainly not a single unitary

1 Q. Okay. And as we sit here today, do you  
 2 still stand by the contents of this article?  
 3 A. Yes.  
 4 MR. GRIFFIS: Objection. It is  
 5 irrelevant to this deposition. And this  
 6 article you objected to on the grounds that  
 7 it postdated IARC beyond the scope of the  
 8 judge's designation extent that is correct,  
 9 your questions are out, too.  
 10 BY MS. WAGSTAFF:  
 11 Q. And is anything -- strike that.  
 12 In March of 2015, you believed  
 13 based on the totality of the evidence that  
 14 glyphosate was a probable carcinogen. Is that  
 15 correct?  
 16 MR. GRIFFIS: Objection. Misrepresents  
 17 the record.  
 18 MR. WHITE: You can answer within the  
 19 scope of the IARC. You don't have to give a  
 20 personal opinion.  
 21 A. The monograph, I think, speaks for  
 22 itself. I was a member of the volume 112 team.  
 23 And it was classified 2 A.  
 24 BY MS. WAGSTAFF:  
 25 Q. Okay. And is anything -- was anything

1 gate. Is that right? And what I mean by that,  
 2 sir, is that there are journals of varying  
 3 qualities and there are peer review processes of  
 4 varying degrees of rigor?  
 5 A. I would -- yes, I would agree with that.  
 6 Q. There are some journals that are very  
 7 prestigious, and you know that if something is  
 8 published in one of those journals, it has been  
 9 through a pretty good peer review process.  
 10 In contrast, there are some  
 11 journals that aren't so prestigious and you may  
 12 not have such confidence in the peer review  
 13 process that things that are published and have  
 14 gone to; is that fair?  
 15 MS. WAGSTAFF: Objection. Foundation.  
 16 A. So I don't completely agree with that.  
 17 BY MR. GRIFFIS:  
 18 Q. Tell me why.  
 19 A. Because you're assuming that what you  
 20 think is a lower tiered journal with a low impact  
 21 factor, every peer review of that article that  
 22 comes through there is -- is flawed. And I don't  
 23 think that's the case.  
 24 Q. I didn't mean to put those words into  
 25 your head at all, sir. There are -- just that

1 there is certainly, in your mind, a hierarchy of  
2 journals and hierarchy of rigor of peer review.  
3 It may not be from good to bad, but from good to  
4 less good?

5 A. Yeah. We call those impact factors.  
6 The type of journal that we consider of high  
7 quality, high level versus lower impact factor  
8 journals.

9 Q. Now, the unpublished data, the stuff  
10 that is produced by academic scientists that  
11 doesn't get published, that hasn't necessarily  
12 been through any sort of review process or  
13 auditing process or procedure to make sure that  
14 it's good science. Is that fair?

15 MS. WAGSTAFF: Objection.

16 A. Unpublished -- unpublished data  
17 essentially doesn't exist in academic science. It  
18 doesn't exist. If it's not published, it doesn't  
19 exist. In the academic world --

20 BY MR. GRIFFIS:

21 Q. Academics. It may as well not exist, is  
22 that what you mean?

23 A. That's right.

24 Q. I mean, it does actually --

25 A. Sure.

1 Q. -- existence --

2 A. Doesn't exist because it's not in the  
3 peer reviewed published, published literature.

4 Q. It doesn't count for you. You don't  
5 consider it?

6 A. Yes.

7 Q. Okay.

8 A. It -- yes.

9 Q. You didn't mean that such things didn't  
10 happen? Certainly, there are studies that don't  
11 ever get published because they are not good  
12 enough. That's fair?

13 A. There are studies that don't get  
14 published because they are not good enough? Did  
15 they go through peer review or did they -- depends  
16 on did they go through peer review system.

17 Q. Right. So my --

18 A. And someone may have found a flaw in the  
19 analysis.

20 Q. I would like to talk about good  
21 laboratory practices, studies that are done under  
22 good laboratory practices, by contrast with  
23 unpublished academic things.

24 A. Uh-huh (affirmative response).

25 Q. That you said may as well not exist for

1 purposes of what academic scientist consider to be  
2 valuable information. GLP labs are certified by  
3 the government. Correct?

4 A. To my knowledge, they are.

5 Q. They go through a rigorous certification  
6 process. True?

7 MS. WAGSTAFF: Object to the form.

8 Using the word "rigorous."

9 A. I believe so. You know. Working in a  
10 GPL, I know there are steps they have to take.  
11 BY MR. GRIFFIS:

12 Q. There are multiple levels of audits,  
13 both audits by internal auditors and the auditors  
14 and the lab are also audited by external auditors.  
15 Correct?

16 A. Yes.

17 Q. Okay. Data collection analysis,  
18 statistical review of the data, all of that is  
19 prescribed and regimented and controlled by the  
20 GLP regulations. Correct?

21 A. Since I don't work in GLP, it was a long  
22 time ago, I can't really address the specifics of  
23 what is involved in the GLP studies.

24 Q. Okay. But you know that there are a  
25 large number of regulations about how the

1 laboratory conducts its practice about the  
2 collection of data and so on. You don't know  
3 exactly what those are?

4 MS. WAGSTAFF: Object to foundation.

5 A. Yes. I think so. I don't know all of  
6 the details about GLP. But -- but they are, I'm  
7 sure, because I worked in it, there are things  
8 that we have to do.

9 BY MR. GRIFFIS:

10 Q. Do you know, for example, that GLP  
11 regulations require that before a study can be  
12 conducted, the study plan, the methodology to be  
13 used, need to be written down?

14 A. Yes. I am aware of that.

15 Q. So, in academic medicine, you may or may  
16 not have a prior plan. It would be best practice  
17 to have a prior plan, but you may not. But in a  
18 GLP lab, you have to have a prior plan; that's the  
19 rule. Right?

20 A. Again, I'm not an expert in GLP.

21 Q. Okay. Do you know, sir, that GLP labs  
22 are -- there are guarantees built into the  
23 process, as a whole point of GLP, as to the  
24 methodology that's followed and that the  
25 methodology that was set out in advance was in

1 fact followed?

2 MS. WAGSTAFF: Object to the foundation  
3 of -- and the word of the use of word  
4 guarantees. There is no guarantee in that I  
5 don't think. So form and foundation.

6 BY MR. GRIFFIS:

7 Q. Go ahead, sir.

8 A. I don't know all of the details of the  
9 GLP requirements, and what's involved in that.

10 Q. Okay. Do you know -- are you familiar,  
11 sir, that in addition to GLP certification and the  
12 instance of GLP lab, companies like Monsanto are  
13 very heavily regulated with regard to the science  
14 that they generate?

15 MS. WAGSTAFF: Object to foundation.

16 A. I would presume if they are trying to  
17 get their products registered by EPA, they are --  
18 they are regulated.

19 BY MR. GRIFFIS:

20 Q. Are you aware that EPA and other  
21 regulators in other countries set forth a list of  
22 the experiments that must be done to establish the  
23 safety and efficacy of products that are submitted  
24 for registration by companies like Monsanto?

25 MS. WAGSTAFF: Object to the foundation.

1 Form and scope of the question.

2 A. I don't know all of the regulatory tests  
3 that are prescribed, but I'm aware that there are  
4 some for sure. I don't know all of the details.

5 BY MR. GRIFFIS:

6 Q. You don't know which tests are  
7 prescribed, but you do know that some are?

8 A. Clearly. I worked in a contract lab  
9 that would have to submit data to a chemical  
10 company that would submit it to EPA. So I'm  
11 familiar with that.

12 Q. Okay. When we're talking about the  
13 regulatory battery of studies conducted by  
14 companies like Monsanto, and other registrants of  
15 glyphosate products, we're talking about highly  
16 regulated studies with methodologies set forth in  
17 advance with bioassays prescribed by the  
18 regulators conducted in GLP labs with multiple  
19 layers of auditing. Correct?

20 MS. WAGSTAFF: Object to the foundation.

21 There's no evidence in front of the deponent  
22 that any of that is actually an accurate  
23 description of the regulation. Object to the  
24 form.

25 A. What is the best way to answer it?

1 MS. WAGSTAFF: Another objection is he's  
2 testified he's not a regulatory expert. So  
3 he's just speculating.

4 A. I know there are requirements that they  
5 have to meet for their products to be registered  
6 with EPA. I don't know the specific details of  
7 it.

8 BY MR. GRIFFIS:

9 Q. And the quality and rigor of GLP  
10 certified studies conducted for regulatory  
11 approval is a completely different universe than  
12 that of unpublished studies produced by academic  
13 labs. Fair?

14 A. Unpublished studies?

15 MS. WAGSTAFF: Object to foundation -- I  
16 mean foundation and object to the form.  
17 Completely different universe.

18 A. I don't know. I can't answer that  
19 question.

20 BY MR. GRIFFIS:

21 Q. There is a world of difference in  
22 quality between the two?

23 A. I would disagree.

24 Q. You believe the GLPs certified labs  
25 produce bad science?

1 A. No. I didn't say that.

2 Q. Okay. What do you mean?

3 A. You implied that unpublished data that  
4 an academic scientist might have was performed  
5 poorly.

6 Q. You told me earlier that -- what I was  
7 alluding to, sir, you told me a little bit earlier  
8 that unpublished data created by academic science  
9 doesn't exist, which you didn't quite mean  
10 literally. You meant it may as well not exist  
11 because it is not even considered. Correct?

12 A. That's correct.

13 Q. And by contrast, GLP registration data  
14 and both continues to exist and is considered by  
15 every regulator in the world in making very  
16 important assessments about risk and hazard.  
17 Correct?

18 MS. WAGSTAFF: Object to foundation.

19 Every single regulator in the world relies on  
20 GLP and I object to that. Objection to form.

21 A. I'm not a GLP expert. I know there are  
22 very stringent regulations in GLP laboratories.  
23 That doesn't mean -- that doesn't necessarily mean  
24 that the experiments -- that the data is valid.

25 I mean, it could be done poorly.

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1 The experiments could still be done poorly in a  
 2 GLP laboratory, the data quality could still be  
 3 poor.  
 4 BY MR. GRIFFIS:  
 5 Q. There are controls to make sure that  
 6 they aren't, though. Right?  
 7 MS. WAGSTAFF: Object to foundation. He  
 8 said he is not a GLP expert.  
 9 A. Yeah. I'm not a GLP expert. Controls  
 10 are important in science and when studies are peer  
 11 reviewed, the peer reviewers are looking for  
 12 whether appropriate controls were utilized in the  
 13 experiments, whether appropriate quality control  
 14 aspects were followed.  
 15 BY MR. GRIFFIS:  
 16 Q. And you don't know if the data is real?  
 17 MS. WAGSTAFF: Objection.  
 18 Argumentative.  
 19 A. You don't know if the data is real?  
 20 BY MR. GRIFFIS:  
 21 Q. Yes, sir.  
 22 A. Oh, if -- when you're peer reviewing?  
 23 Q. Yes, sir.  
 24 A. Oh, you think it could be fabricated?  
 25 Is that what you're indicating?

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1 Q. It's conceivable on peer review because  
 2 you aren't auditing the lab, not backing up the  
 3 scientist in that way. Correct?  
 4 MS. WAGSTAFF: Objection. Hypothetical.  
 5 MR. WHITE: You don't have to answer any  
 6 hypotheticals.  
 7 BY MR. GRIFFIS:  
 8 Q. There aren't controls in academic labs  
 9 in a systematic way, the way they are in GLP labs  
 10 to ensure data quality. That's fair to say,  
 11 right?  
 12 MS. WAGSTAFF: Objection. Foundation.  
 13 A. Yeah. It's an interesting question  
 14 because GLP requires a great deal of prescriptions  
 15 you have to follow. And I'm aware of that.  
 16 BY MR. GRIFFIS:  
 17 Q. Okay. I will move on from that.  
 18 In the preamble, which is Exhibit  
 19 10 there. Can you pull it up, please?  
 20 A. Preamble?  
 21 Q. Yes, sir. Page 20.  
 22 MS. WAGSTAFF: Hold on a second.  
 23 BY MR. GRIFFIS:  
 24 Q. In the description of sufficient  
 25 evidence of carcinogenicity, do you know why the

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1 preamble calls for studies ideally to be conducted  
 2 under good laboratory practices?  
 3 A. Let me see. I'm going to read, "An  
 4 increase in the incidents of tumors in both sexes  
 5 of a single species in a well conducted study  
 6 ideally conducted under good laboratory practices  
 7 can also provide sufficient evidence." Do I know  
 8 why?  
 9 Q. Do you know why IARC states that it is  
 10 willing in some circumstances to rely on a single  
 11 well conducted study ideally conducted under good  
 12 laboratory practices? Why it says ideally  
 13 conducted in good laboratory practices?  
 14 A. I don't know if it says single study.  
 15 Of a single species --  
 16 Q. In a well conducted study.  
 17 A. Yeah. Again, I'm not an expert in GLP  
 18 that can answer that question. Why -- I don't  
 19 think it gets more weight than an academic  
 20 study -- a GLP study.  
 21 Q. IARC says ideally such a study would be  
 22 conducted under good laboratory practices. Is  
 23 that right?  
 24 A. That's what -- that's what a preamble  
 25 says, yes.

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1 Q. Thank you for your time today, sir.  
 2 MS. WAGSTAFF: No further questions for  
 3 me.  
 4 VIDEOGRAPHER: Off record, 6:11.  
 5 (Ended at 6:11 p.m.)  
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1 CERTIFICATE OF COURT REPORTER  
 2 I, Todd J. Davis, Court Reporter and  
 3 Notary Public in and for the County of Madison,  
 4 State of Mississippi, hereby certify that the  
 5 foregoing pages contain a true and correct  
 6 transcript of the testimony of MATTHEW K. ROSS, as  
 7 taken by me in the aforementioned matter at the  
 8 time and place heretofore stated, as taken by  
 9 stenotype and later reduced to typewritten form  
 10 under my supervision to the best of my skill and  
 11 ability by means of computer-aided transcription.

12 I further certify that under the  
 13 authority vested in me by the State of Mississippi  
 14 that the witness was placed under oath by me to  
 15 truthfully answer all questions in this matter.

16 I further certify that I am not in the  
 17 employ of or related to any counsel or party in  
 18 this matter and have no interest, monetary or  
 19 otherwise, in the final outcome of this matter.

20 Witness my signature and seal this the  
 21 5TH day of MAY, 2017.

22 \_\_\_\_\_  
 23 TODD J. DAVIS, CSR #1406

24 My Commission Expires:  
 25 March 27, 2021

1 ERRATA SHEET

2 Case Name:

3 Deposition Date:

4 Deponent:

5 Pg. No. Now Reads Should Read Reason

Pg. No.	Now Reads	Should Read	Reason
6	_____	_____	_____
7	_____	_____	_____
8	_____	_____	_____
9	_____	_____	_____
10	_____	_____	_____
11	_____	_____	_____
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19	_____	_____	_____
20	_____	_____	_____

21 \_\_\_\_\_  
 22 Signature of Deponent

23 SUBSCRIBED AND SWORN BEFORE ME

24 THIS \_\_\_\_ DAY OF \_\_\_\_\_, 2017.

25 \_\_\_\_\_  
 (Notary Public) MY COMMISSION EXPIRES: \_\_\_\_\_

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