

**Johnson v. Monsanto**

 **Martens, Mark A. (Vol. 01) - 04/07/2017**

**1 CLIP (RUNNING 02:25:53.247)**

 Dr. Mart- -- can you please state your ...

**MM-0407-0001018**

**277 SEGMENTS (RUNNING 02:25:53.247)**



**1. PAGE 10:18 TO 11:08 (RUNNING 00:00:26.676)**

18 Q Dr. Mart- -- can you please state your  
19 name for the record.  
20 A Mark Martens.  
21 Q Okay. And you're a doctor; is that  
22 correct?  
23 A I'm a Ph.D. in pharmaceutical sciences  
24 and toxicology.  
25 Q Okay. Would you prefer I call  
00011:01 you Dr. Martens or Mr. Martens?  
02 A Whatever you like.  
03 Q Which would you prefer?  
04 A Oh, you can call me Mr. Martens. That's  
05 fine with me.  
06 Q Okay. So, Mr. Martens, have you had your  
07 deposition taken before?  
08 A No.

**2. PAGE 12:19 TO 12:22 (RUNNING 00:00:11.167)**

19 Q Okay. So what I've given you is marked

 **MARTENS 1 -**

20 as Exhibit 9-1 is your CV. Is that an accurate  
21 version of your CV?  
22 A Yes, it is.



**3. PAGE 13:01 TO 14:07 (RUNNING 00:01:03.015)**

00013:01 So it looks like you have some -- some  
02 areas of expertise; is that correct?  
03 A That is correct.  
04 Q Okay. And what are your areas of  
05 expertise?  
06 A My areas of expertise throughout my  
07 career are, you know, toxicology in all its forms.  
08 That means as well experimental, regulatory, as  
09 evaluative toxicology.  
10 Q Okay. And it looks like you had marked  
11 down "experimental toxicology, regulatory  
12 toxicology" -- I missed one -- "hazard and risk  
13 assessment, and preclinical development" as your past  
14 and current fields of expertise, correct?  
15 A Yes. I can add that when I was at the  
16 university, I was also involved in forensic  
17 toxicology.  
18 Q Okay. So an update to this would be that  
19 you're also an expert in forensic toxicology?  
20 A Yes.  
21 Q Okay. Excellent.  
22 And it looks like -- like you mentioned  
23 you've gotten your Ph.D. in the school of pharmacy in  
24 1976; is that correct?  
25 A Yes.  
00014:01 Q And a rough math is around 40 years ago,  
02 right?

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03 A Right.  
04 Q And so you --  
05 A Yep, 45 years ago, yeah.  
06 Q 45 years ago?  
07 A Yes.

4. PAGE 14:14 TO 15:01 (RUNNING 00:00:32.773)

14 Q Okay. And right now, if you move to the

 MARTENS 1-002 -

15 next page, it looks like your current position is a  
16 consultant in preclinical development and toxicology;  
17 is that correct?

18 A That is correct.

19 Q Okay. So can you tell the jury a little  
20 bit about what -- what your -- what that means, your  
21 current job right now.

22 A That means that as an independent  
23 consultant, I'm asked as well by pharmaceutical  
24 companies, chemical companies and agrochemical  
25 companies to -- to provide them support in

00015:01 interpreting and in analyzing toxicology studies.

5. PAGE 15:08 TO 15:14 (RUNNING 00:00:12.357)

08 Q Okay. And is -- is Monsanto one of the  
09 companies that has hired you as a consultant in that  
10 past seven years?

11 A Yes.

12 Q Okay. And Monsanto has paid you for that  
13 consulting position over the last seven years?

14 A Yes.

6. PAGE 15:16 TO 16:11 (RUNNING 00:00:45.899)

16 A It's actually the last five years,  
17 because I was actually contacted by Monsanto in 2011  
18 for a first contact.

19 Q Okay. So, just so we're on the same  
20 page --

21 A Mm-hmm.

22 Q -- in 2011, Monsanto contacted you --

23 A Mm-hmm.

24 Q -- to consult for them; is that --

25 A Right.

00016:01 Q -- correct?

02 And what -- what sort of consulting job  
03 were you contacted for in 2011?

04 A That was actually for the analysis of  
05 mechanistic studies on another compound than  
06 glyphosate for Monsanto.

07 Q Okay. And have you done consulting work  
08 for Monsanto since 2011 on glyphosate?

09 A Only the last year.

10 Q Okay. So, yes, you have?

11 A Yes, I have.

7. PAGE 17:01 TO 18:08 (RUNNING 00:01:21.130)

00017:01 Q So it goes on, your -- your CV goes on to  
02 talk about your current and previous positions. And  
03 if you go through it, it says here that -- and this

 MARTENS 1-003 -

04 is on page 3 of your CV, it says that you were



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05 promoted to a Monsanto Science Fellow in 2002; is  
06 that correct?

07 A That's correct.

08 Q And can you tell the jury what that --  
09 what a Monsanto Science Fellow means?

10 A A Monsanto Science Fellow is a  
11 distinguished degree as a scientist in the Monsanto  
12 organization.

13 Q Okay. So it's a distinguished scientist  
14 within Monsanto, you were promoted to that?

15 A Yes. Right.

16 Q Okay. And is that a position within  
17 Monsanto?

18 A That is not a position. That is a kind  
19 of a degree which should be considered as a parallel  
20 type of career path next to the managerial career  
21 path and which is reserved for people who are  
22 continuously involved in scientific projects and  
23 scientific research.

24 Q So when you were promoted to a Monsanto  
25 Science Fellow in 2002, were you a current Monsanto  
00018:01 employee at that time?

02 A Yes.

03 Q Okay. So is -- are the Monsanto Science  
04 Fellow promotions just for Monsanto employees?

05 A That is just -- well, that is a system  
06 that exists in every chemical, agrochemical and  
07 pharmaceutical industry which allows career paths for  
08 people who want to stick to scientific career paths.

### 8. PAGE 18:09 TO 18:13 (RUNNING 00:00:17.622)

09 Q Okay. You were a toxicology director in  
10 Europe and Africa for Monsanto starting in 1992 and  
11 ending in 2004; is that correct?

12 A Actually, I started with Monsanto in  
13 1989.

### 9. PAGE 18:15 TO 19:03 (RUNNING 00:00:28.744)

15 A And then I was hired as a manager of  
16 toxicology, and then afterwards I was promoted and I  
17 graduate to director of toxicology, Europe and  
18 Africa, yeah.

19 Q Okay. So that's a good clarification.  
20 You began working for Monsanto in 1989?

21 A Yes.

22 Q And when did you quit working for  
23 Monsanto?

24 A At the end of 2003.

25 Q Okay. So then between 2003 and when they  
00019:01 hired you to be a consultant in 2011, did you do any  
02 work with Monsanto?

03 A No.

### 10. PAGE 19:09 TO 19:12 (RUNNING 00:00:08.606)

09 Q Okay. And you were actually, it looks  
10 like, a professor or assistant professor at the -- at  
11 St. Louis University in St. Louis, correct?

12 A Yes.

### 11. PAGE 19:16 TO 19:23 (RUNNING 00:00:18.381)

16 Q Okay. And you were teaching toxicology  
17 to college students.

18 A No, no, not college students.

19 Q Okay.

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20           A     I was teaching toxicology to medical  
21 postgraduates, and those were two branches that was  
22 experimental and occupational and forensic  
23 toxicology.

**12. PAGE 20:05 TO 20:10 (RUNNING 00:00:17.679)**

05           Q     And then you go on to list a few other of  
06 your toxicology positions, but the bottom line is  
07 that you have been working in toxicology for 45  
08 years, and there would be few people that wouldn't  
09 consider you an expert in toxicology; is that  
10 correct?

**13. PAGE 20:12 TO 20:12 (RUNNING 00:00:02.042)**

12           THE WITNESS: Yes.

**14. PAGE 20:22 TO 21:08 (RUNNING 00:00:38.406)**

 **MARTENS 1-005 -**

22                     On page 5 of your CV, you also have a lot  
23 of experience with international and national  
24 organizations. Then you list a couple of pages of  
25 those, the EU Commission and Council, the OECD  
00021:01 chemicals group. You go on to list -- list a bunch,  
02 right?  
03                     On the next page, you have experience

 **MARTENS 1-006 -**

04 with IARC, right?  
05           A     (The witness nods.)  
06           Q     You have experience with the European  
07 Council for the chemical industry, if you go down  
08 there.

**15. PAGE 21:09 TO 21:17 (RUNNING 00:00:20.496)**

 **MARTENS 1-007 -**

09                     You also have experience on the next page  
10 with the European Crop Protection Association where  
11 it looks like you were participating as a  
12 representative of Monsanto, correct?  
13           A     Yes, correct.  
14           Q     So sometimes you engage with regulatory  
15 or international associations on behalf of Monsanto;  
16 is that correct?  
17           A     Yes.

**16. PAGE 21:18 TO 21:21 (RUNNING 00:00:09.931)**

18           Q     Okay. And you list -- you go through and  
19 there's ten organizations that you list, so you have  
20 experience with international organizations, correct?

 **-KEMARTENS 1-007 - Clear Attached Exhibit martens 1-007**

21           A     That's correct.

**17. PAGE 23:10 TO 23:14 (RUNNING 00:00:06.863)**

10           Q     Okay. And you lived in the United States  
11 for two years; is that correct?  
12           A     Two years, yes.  
13           Q     And then back to Belgium, correct?

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14 A Yes.

**18. PAGE 23:20 TO 24:01 (RUNNING 00:00:15.244)**

20 Q Okay. So you also lecture on toxicology  
21 and related sciences, correct?

22 A Yes.

23 Q And I counted up really quickly that you  
24 have lectured at about seven institutes or  
25 universities. Does that sound correct?

00024:01 A That sounds correct, yeah.

**19. PAGE 24:06 TO 24:09 (RUNNING 00:00:09.662)**

06 Q Okay. So you've authored -- coauthored a  
07 book on -- is that on toxicology as well?

08 A This is on preclinical development of --  
09 and toxicology is a part of preclinical development.

**20. PAGE 24:13 TO 24:15 (RUNNING 00:00:07.143)**

13 And then very impressively you speak four  
14 languages as well, correct?

15 A Yes.

**21. PAGE 24:24 TO 25:08 (RUNNING 00:00:37.916)**

24 What is oxidative stress?

00025:01 A Oxidative stress is a state of a cell  
02 where there is a production of free oxygen radicals,  
03 which are inclined actually to damage several  
04 molecules in the cell of which DNA.

04 Q Okay. And how long has the scientific  
05 community known about oxidative stress?

06 A I think that from 1990, '92, there was  
07 science developing in that direction as a possible  
08 mechanism of carcinogenicity.

**22. PAGE 25:16 TO 25:24 (RUNNING 00:00:23.730)**

16 Q Okay. So in the early 1990s, it's fair  
17 to say that the scientific community was aware that  
18 oxidative stress could increase -- could -- could  
19 lead to an increased risk of cancer; is that correct?

20 A That was in the beginning, and, you know,  
21 there was more and more information that these were  
22 possible mechanisms for carcinogenicity, yes.

23 Q Sure. And what is the mechanism of how  
24 oxidative stress can increase the risk of cancer?

**23. PAGE 27:07 TO 27:22 (RUNNING 00:00:55.911)**

07 A Right. So oxidative stress is a state of  
08 the cell where there is a production of free oxygen  
09 radicals. Now, free oxygen radicals are a very  
10 reactive species, molecular species, and they bind to  
11 the oxidized molecules in the cell of which DNA. So  
12 oxidation of DNA and there is oxidation of the  
13 nucleotides in the DNA can lead, after cell division,  
14 to mutation, which can be a permanent change in the  
15 gene, and a permanent change in the gene can also  
16 make changes in gene transcription, which can lead to  
17 phenotypic change of the cell leading to cancer.

18 Q Excellent. Thank you.

19 One other question I -- I have for you is  
20 the -- the concept of hazard assessment versus risk  
21 assessment. Are you familiar with those two terms?

22 A Absolutely.

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24. PAGE 28:02 TO 29:17 (RUNNING 00:01:17.690)

02 Q Okay. And is it fair to say that a  
03 hazard assessment is considering whether an effect  
04 can happen under any circumstance; is that fair?  
05 A That's fair.  
06 Q Okay. And is it fair to say that a risk  
07 assessment is considering under what specific  
08 circumstance that effect will happen.  
09 A Yes.  
10 Q Okay. I just wanted to make sure I had  
11 those -- those straight in my head before we started  
12 going.  
13 The first topic we're going to get into  
14 is, do you know Dr. James -- the late Dr. James  
15 Parry?  
16 A Yes.  
17 Q Did he go by Jim Parry or James?  
18 A That was Jim.  
19 Q Jim? Okay.  
20 A Yeah.  
21 Q Dr. Jim Parry. And were you friends with  
22 him?  
23 A Oh, we knew each other from scientific  
24 congresses. Friends is a little bit too close.  
25 Q Okay. You were professional  
00029:01 acquaintances?  
02 A Yes. Put it that way.  
03 Q And what was -- was Dr. Parry a  
04 toxicologist?  
05 A He was a toxicologist specializing in  
06 genetic toxicology.  
07 Q Okay. And was he an expert in his field?  
08 A Yes.  
09 Q Okay. He was a good scientist, correct?  
10 A He was a good scientist, yes.  
11 Q Okay. And are you -- he has since passed  
12 away. Has --  
13 A Mm-hmm.  
14 Q -- has -- am I correct?  
15 A Yes.  
16 Q I believe sometime in around 2010, '11.  
17 A I don't remember.

25. PAGE 30:12 TO 31:07 (RUNNING 00:00:38.219)

12 Are you familiar with the Bolognesi paper  
13 from 1997?  
14 A Yes.  
15 Q Okay. Am I pronouncing that right?  
16 A Bolognesi.  
17 Q Bolo -- okay. Bolognesi. The American  
18 way I'm pronouncing it.  
19 A That's okay.  
20 Q Okay. Are you familiar with the Peluso  
21 paper --  
22 A Yes.  
23 Q -- from 1998?  
24 A Yes.  
25 Q Okay. And are you familiar with the two  
00031:01 Dr. Lioi papers from -- both from 1998?  
02 A Yes, I recall that these have been in our  
03 -- are considered, but I -- I didn't actually look at  
04 the papers themselves recently.  
05 Q Okay. But you're familiar with all four  
06 of those papers --  
07 A Yes. I know about them, yes.

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26. PAGE 31:17 TO 32:05 (RUNNING 00:00:30.743)

17 Q Okay. So all four of these papers deal  
18 with the genotoxicity of glyphosate and/or Roundup,  
19 correct?  
20 A Correct, yes.  
21 Q Okay. And you put ourselves -- if we  
22 transport back to the 1999 time period right before  
23 the turn of the century, all four of those papers  
24 came out, correct?  
25 A Yes.  
00032:01 Q They were all 1997 to 1999, correct?  
02 A Yeah, yeah.  
03 Q Okay. And these papers weren't good for  
04 the genotox profile of glyphosate and Roundup,  
05 correct?

27. PAGE 32:07 TO 32:09 (RUNNING 00:00:07.087)

07 THE WITNESS: I will phrase it this way:  
08 They were not in concordance with the existing  
09 results on genotoxicity with -- on glyphosate.

28. PAGE 33:13 TO 33:21 (RUNNING 00:00:26.492)

13 So did you go to Monsanto with these  
14 papers or did Monsanto come to you, or do you not  
15 recall because it's been so long?  
16 A Well, I don't recall that detail, but --  
17 but we both were aware at the same time that these  
18 papers had been published and these needed attention.  
19 Q Okay. Excellent.  
20 I'm going to hand you what's been -- what

 MARTENS 2 -

21 we are going to mark as -- I guess this will be

29. PAGE 33:22 TO 33:22 (RUNNING 00:00:05.826)

22 Exhibit 2. No, not Exhibit 2. I need 5.

30. PAGE 34:04 TO 34:10 (RUNNING 00:00:16.925)

04 Q And when I hand you e-mails,  
05 Mr. Martens, feel free to take all the time you need  
06 to read them, and if we need to go off the record to  
07 give you more time, we certainly can. Okay? I'm not  
08 trying to rush you through any documents.  
09 A Okay. Can I read them now?  
10 Q Sure.

31. PAGE 35:04 TO 36:13 (RUNNING 00:01:31.955)

04 So this is a -- these are what the  
05 e-mails from the 19 -- late 1990s look like when  
06 they're printed out. The first e-mail was from Donna  
07 Farmer, and it was written on December 27th, 1998,  
08 which is two days -- two or three days after  
09 Christmas back in 1998.  
10 And who is Donna Farmer?  
11 A Dr. Farmer is a product toxicologist  
12 located in St. Louis at that time.  
13 Q Okay. And she still is employed with  
14 Monsanto, correct?  
15 A I believe so, yes.  
16 Q And at this time was Dr. Farmer your  
17 boss?  
18 A No.



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19 Q No. Was Dr. Farmer on the same sort of  
20 level as you within the hierarchy of Monsanto?  
21 A At about the same level at that time,  
22 yes.  
23 Q Okay. And did you and Dr. Farmer work a  
24 lot together at this point?  
25 A We had for this type of project  
00036:01 communications.  
02 Q Okay. And did you and Dr. Farmer get  
03 along?  
04 A Yeah.  
05 Q Okay. So this looks like Dr. Farmer was  
06 talking about a meeting that y'all had had on  
07 December 17th on mutagenicity; is that correct?  
08 A That is correct, yes.  
09 Q And the reason why I think that you were  
10 at this meeting is that you write back to her two  
11 days later, is that -- or -- yeah, two days later; is  
12 that correct? If you look above.  
13 A Yeah, it seems to be correct, yes.

**32. PAGE 36:18 TO 37:03 (RUNNING 00:00:42.486)**

18 Q So you had a meeting on December 17th of  
19 1998, and ten days later she writes an e-mail to  
20 y'all, probably slowed down with the holidays, of  
21 course, and about what had happened on December 17th.  
22 And so she has action items from --  
23 "Action items from the meeting, from today's call."  
24 So it looks like she had written that simultaneously,  
25 and then just circulates that later.  
00037:01 So MON 35050, what is that?  
02 A That is a formulation that has been used  
03 by Peluso and Bolognesi for their test system.

**33. PAGE 37:04 TO 37:07 (RUNNING 00:00:09.652)**

04 Q Okay. So would it be fair to call those  
05 the Italian papers? Are they both from Italy?  
06 A It would be fair to call it the Italian  
07 formulation.

**34. PAGE 37:13 TO 40:03 (RUNNING 00:02:27.673)**

13 Q Okay. So this is the -- this is the  
14 formulation that was used in the Italian papers,  
15 correct?  
16 A Yes, correct.  
17 Q Okay. So you guys are now knowing about  
18 this, this is in late 1998, and you are talking about  
19 doing tests on formulation blanks of the Italian  
20 formulation, correct?  
21 A Yes. That was the idea, yeah.

 **MARTENS 2-002 -**



22 Q Okay. And if you turn to the next page,  
23 and if you go down, we talk about -- this is where  
24 Dr. Parry is first talked about.  
25 A Mm-hmm.  
00038:01 Q You have other topics, as you can see, as  
02 the jury can see, that they had talked about, but in  
03 relative part, it says that: "Agreed that an  
04 external global network of genotox experts need to be  
05 developed."  
06 Do you see that?  
07 A Yes.  
08 Q Okay. "As EU has an immediate" --

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09 something there -- "as EU has an immediate need and  
10 is critical area now, it was agreed that Mark  
11 Martens" --  
12 That's you, correct?  
13 A Yes.  
14 Q -- "would contact Dr. Parry next week to  
15 discuss with him his participation in the support of  
16 glyphosate -- glyphosate-based formulations, genotox  
17 issues." Correct?  
18 A Correct.  
19 Q And that's because you're an expert in  
20 toxicology, right?  
21 A Yes.  
22 Q And Dr. Parry is an expert in genotox --  
23 toxicology, correct?  
24 A Yes.  
25 Q So you two would make the perfect pair to  
00039:01 work on this issue, correct?  
02 A That's correct.  
03 Q Okay. Then it goes on later to say:  
04 "For North America, Gary Williams will be here in  
05 early February as part of the Cantox project."  
06 Okay. Who is Gary Williams? Do you know  
07 him?  
08 A Yes, I know Gary Williams. He is an  
09 authority in the United States on the mechanisms of  
10 carcinogenicity and genotoxicity.  
11 Q Okay. And is he a Monsanto employee?  
12 A No.  
13 Q Do you know, to your knowledge, has he  
14 ever been a Monsanto employee?  
15 A No. Never.  
16 Q He never has or you don't know?  
17 A He never has to my knowledge, no.  
18 Q Okay. And then it says: "Larry Kier  
19 will -- as" -- as, I think it means to say has --  
20 "graciously agreed to join in those discussions."  
21 And who is Larry Kier?  
22 A Dr. Larry Kier was the head of the  
23 laboratory of genotoxicology of the Environmental  
24 Health Laboratory of Monsanto in St. Louis. So he  
25 was the head genotoxicology expert within the  
00040:01 organization.  
02 Q Okay. And he is a Monsanto employee?  
03 A He is a Monsanto employee.

**35. PAGE 41:12 TO 41:16 (RUNNING 00:00:11.611)**

12 right. It's a real -- so Dr. Farmer writes: "It's a  
13 real concern that these papers," meaning the Lioi  
14 papers, "may create an even bigger problem for us  
15 than the Peluso paper. Therefore, we do some things  
16 quickly."

**36. PAGE 41:18 TO 41:19 (RUNNING 00:00:03.541)**

18 THE WITNESS: That is the opinion of  
19 Dr. Donna Farmer.

**37. PAGE 41:21 TO 41:23 (RUNNING 00:00:06.740)**

21 Q Okay. And did you have any -- did you  
22 disagree with that opinion?

 -KEMARTENS 2-002 - Clear Attached Exhibit martens 2-002

23 A I didn't agree completely actually.



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**38. PAGE 41:24 TO 42:07 (RUNNING 00:00:26.564)**

24 Q Okay. Did you agree that the Peluso  
25 paper created a problem for Monsanto?  
00042:01 A I agreed that the Peluso was a new type  
02 of finding and needed to be addressed.  
03 Q Okay. And so one of the ways that --  
04 that Monsanto was deciding to address it was to have  
05 a letter sent from Monsanto Italy or Brussels saying  
06 that the -- the data doesn't agree with other data.  
07 A Mm-hmm.

**39. PAGE 43:02 TO 43:03 (RUNNING 00:00:04.119)**

 **MARTENS 3 -**

02 Q I'm going to hand you what will be marked  
03 as Exhibit 3.

**40. PAGE 45:08 TO 45:19 (RUNNING 00:00:37.398)**

08 So if you look again at this e-mail

 **MARTENS 3-002 -**

09 exhibit, again it's a cascade, and it looks like we  
10 are about a month later after the last e-mail that we  
11 looked at. We are now -- Dr. Farmer is now writing  
12 an e-mail on January 27th, '99, and the last one was  
13 December 27th, so we're exactly a month later.  
14 And she's talking about minutes from a  
15 meeting on 1/15; is that correct?  
16 A Yes.  
17 Q Okay. And you were in fact in attendance

 **MARTENS 3-003 -**

18 in that meeting.  
19 A Yes.

**41. PAGE 46:14 TO 47:01 (RUNNING 00:00:27.668)**

14 Number 3 was: "The group recommended  
15 testing the full formulations." Correct?  
16 A That's what it says, yes.  
17 Q Okay. And what does the "full  
18 formulations" mean?  
19 A The full formulation is actually the  
20 active ingredient together with the co-formulants.  
21 Q Okay. So Roundup?  
22 A For example, yes.  
23 Q Okay. Instead of testing just glyphosate  
24 or just the surfactants, the "full formulation" means  
25 the finished product of Roundup.  
00047:01 A Yes.

**42. PAGE 47:03 TO 47:08 (RUNNING 00:00:20.443)**

03 And then we -- we scroll down here a  
04 little bit more, and we talk about: "One of the full  
05 formulations discussed was MON 35050, which we had  
06 already determined was the product used in the Peluso  
07 and Bolognesi papers," which we've called the Italian  
08 formula.

**43. PAGE 47:10 TO 47:23 (RUNNING 00:00:42.640)**

10 Q "The team was to develop a positive press

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11 release." Correct?  
12 A That's what it says.

 MARTENS 3-004 -



13 Q Okay. And then we get to the next page,  
14 where we will spend a little bit of time. We had  
15 touched before about Dr. Parry. This group again,  
16 which if I can go back to here, in attendance was  
17 Donna Farmer, which we talked about Dr. Farmer  
18 earlier, Bill Heydens.

19 Can you tell me who Bill Heydens is?  
20 A Dr. Bill Heydens was my colleague in the  
21 United States, mostly responsible in the beginning  
22 for glyphosate, and then after also other products.  
23 He's a toxicologist.

44. PAGE 48:04 TO 48:09 (RUNNING 00:00:14.774)

04 Q And then that's you. And then Alan  
05 Wilson, can you tell me who Alan Wilson is?  
06 A Alan Wilson was the -- the toxicologist  
07 working at the Environmental Health Laboratory  
08 responsible for biochemical mechanisms and mechanisms  
09 of toxicity.

45. PAGE 48:13 TO 49:12 (RUNNING 00:00:47.462)

13 Q Okay. And was Alan Wilson a Monsanto  
14 employee?

15 A Yes.

16 Q Okay. So this is a Monsanto meeting,  
17 correct?

18 A Yes.

19 Q Okay. With all toxicologists.

20 A Mm-hmm.

21 Q And everyone at that meeting is located  
22 in the United States except for you, correct?

23 A Yes.

24 Q Okay. Now, if we go back to this -- so  
25 we're talking about the external global networks of  
00049:01 genotox experts at this meeting, and when talking  
02 about the EU, which is -- you know, what's the EU?

03 A The European Union.

04 Q Okay. So that would fall under your  
05 purview, correct?

06 A Yes.

07 Q Okay. We already talked about that  
08 Dr. Parry is a recognized genotox expert, right?

09 A Yes.

10 Q Okay. What is not known is how he views  
11 some of the nonstandard endpoints. Correct?

12 A Yes.

46. PAGE 49:13 TO 49:16 (RUNNING 00:00:09.544)

13 Q Okay. And those nonstandard endpoints  
14 are the endpoints that were evaluated in the Rank  
15 article and the Bolognesi article, correct?

16 A Yes.

47. PAGE 49:17 TO 49:20 (RUNNING 00:00:11.628)

17 Q Okay. So your group of Monsanto  
18 toxicologists were saying that, although Dr. Parry is  
19 an expert in genotox toxicology, we don't know what  
20 his views are on this paper, correct?

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48. PAGE 49:24 TO 50:20 (RUNNING 00:00:53.323)

24 THE WITNESS: Well, we want to know his  
25 opinion on these papers.  
00050:01 BY MS. WAGSTAFF:  
02 Q Yeah, you were just saying --  
03 A Yeah.  
04 Q -- you don't know -- he is an expert, but  
05 we don't know what his opinions are, correct?  
06 A Yes.  
07 Q Okay. And so to figure out his opinions,  
08 and it says, Before we ask him, meaning Dr. Parry, to  
09 get more deeply involved, which is reviewing all the  
10 literature, data, or to represent you as a  
11 consultant, you wanted to ask Dr. Parry to review a  
12 subset of the articles, correct?  
13 A Right.  
14 Q Once again, everyone turns to you, right?  
15 A Mm-hmm.  
16 Q Okay. So it was proposed that Mark  
17 Martens, that's you, would contact Dr. Parry and ask  
18 him for a written review of the articles by Rank,  
19 Bolognesi, Peluso and Lioi, correct?  
20 A Correct.

49. PAGE 52:02 TO 52:12 (RUNNING 00:00:43.921)

02 Q Okay. And then based on his critique of  
03 the genotox papers, your group would decide whether  
04 or not you would expand his role, correct?  
05 A Yes.  
06 Q Okay. Okay. Once again, y'all are  
07 talking about the Lioi papers, the two Lioi papers,  
08 and once again, Dr. Farmer says that the Lioi papers  
09 may present an even bigger problem because the  
10 studies are with glyphosate and are on a more  
11 standard endpoints, correct?  
12 A Yes.

50. PAGE 52:13 TO 52:16 (RUNNING 00:00:07.228)

13 Q Okay.  
14 A But the -- I interpreted the Lioi paper  
15 and came to the conclusion it's a very low quality  
16 paper.

51. PAGE 52:23 TO 53:04 (RUNNING 00:00:18.506)

23 Q But as of right now, we're sitting here  
24 in January of -- of '99, this group of Monsanto  
25 toxicologists are once again stating that because  
00053:01 it's a standard -- has more standard endpoints, the  
02 Lioi presents an even bigger problem for Monsanto; is  
03 that correct?  
04 A That is correct.

52. PAGE 53:05 TO 53:07 (RUNNING 00:00:09.969)

05 Q Okay. If we then move on to the  
06 beginning, because, remember, we've got to go  
07 backwards on this.

53. PAGE 53:08 TO 53:10 (RUNNING 00:00:08.538)

08 MS. WAGSTAFF: Yeah. Okay. Okay. Let's  
09 see here. These are out of order, so they're  
10 confusing me a little bit.

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54. PAGE 53:13 TO 53:13 (RUNNING 00:00:02.776)

13 MS. WAGSTAFF: No, I got it. I want 110.

55. PAGE 53:15 TO 53:17 (RUNNING 00:00:14.825)

 MARTENS 3-002 -

15 Q Okay. So in response to Dr. Farmer  
16 writing these notes, you respond, correct?  
17 A That's what I see, yes.

56. PAGE 54:12 TO 54:13 (RUNNING 00:00:04.727)

12 Q It said that you were in agreement with  
13 the discussion that you had in St. Louis, correct?

57. PAGE 54:16 TO 54:17 (RUNNING 00:00:03.472)

16 THE WITNESS: Yeah, it was reflecting the  
17 meeting.

58. PAGE 54:19 TO 55:10 (RUNNING 00:00:41.032)

19 Q Yeah, okay. And then you also told the  
20 group that in the meantime you contacted Dr. Parry,  
21 and a letter of authorization with his papers -- with  
22 the papers is underway to him, correct?  
23 A Mm-hmm. Yes, that is what it says.  
24 Q Okay. So you were acting on the  
25 decisions that had been made at that meeting,  
00055:01 correct?  
02 A Yes.  
03 Q Okay. Oh, and it said that -- I forgot  
04 an important part -- it said a report is expected by  
05 mid-February.  
06 So we're now sitting here in January  
07 of -- of -- 28th, and so you're telling the group  
08 that Dr. Parry will have his report within a few  
09 weeks, correct?  
10 A That's what it says, yes.

59. PAGE 57:12 TO 58:01 (RUNNING 00:00:35.918)

12 Q All right. So, here we are two weeks

 0217 -

13 later, and this is a fax sent on February 15th --  
14 because in Europe you put the month and date opposite  
15 of us, correct?  
16 A Yes.  
17 Q -- 1999, and it's a fax from you, from  
18 Dr. Mark Martens, and the subject is "Dr. Parry's  
19 Report," correct?  
20 A Correct.  
21 Q And you are sending it to Alan Wilson,  
22 Donna Farmer and Bill Heydens, correct?  
23 A Correct.  
24 Q So you're sending it to everyone that was  
25 at that meeting a few weeks earlier.  
00058:01 A Yes.

60. PAGE 58:03 TO 58:15 (RUNNING 00:00:35.097)

03 And you say: "Dear Alan, Donna and Bill:  
04 Please find herewith Professor Parry's evaluation of  
05 the four papers." Correct?  
06 A Yes.



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07 Q And what were those four papers?  
08 A That was the Lioi paper, the Peluso  
09 paper, the Bolognesi and the Rank paper.  
10 Q Okay. And you said you sent him on  
11 genotoxicity of glyphosate and Roundup, correct?  
12 A Yes.  
13 Q Okay. And you're asking for comments and  
14 guidance on what to do next, correct?  
15 A Yes.

61. PAGE 58:19 TO 59:03 (RUNNING 00:00:30.379)

 0217-002 -

19 Q Okay. And so the next page of this  
20 document appears to be a cover sheet from Dr. Parry  
21 to you. Correct?  
22 A Yes.  
23 Q Okay. Professor James M. Parry. Where  
24 was he a professor?  
25 A At Swansea university in the U.K.  
00059:01 Q Okay. And he wrote you this on  
02 February 11th, 1999, to Dr. Martens, correct?  
03 A Yes.

62. PAGE 60:09 TO 60:22 (RUNNING 00:00:35.095)

09 Q Okay. And he goes through the papers  
10 that Monsanto asked him to review, correct?

 0217-005 -

11 A Yes.  
12 Q Okay. And the first one is the Rank,  
13 et al., paper and that was in 1993, right?  
14 A Right.  
15 Q Okay. And this is a Roundup mixture that  
16 was tested, correct?  
17 A Yes.  
18 Q Okay. And the conclusion that Dr. Parry  
19 found was that: "In vitro evidence of genotoxic  
20 effect for Roundup mixtures inadequate in vivo  
21 studies."  
22 So tell me what "in vitro" means.

63. PAGE 61:06 TO 61:18 (RUNNING 00:00:30.667)

06 A In vitro testing occurs normally with  
07 cells or bacteria or tissues in culture. So that  
08 means literally in vitro, you know, either in petri  
09 dishes or in culture dishes.  
10 Q Okay. And that's an accepted method of  
11 conducting studies, correct?  
12 A Yes.  
13 Q Okay. In toxicology that's very  
14 accepted?  
15 A Yes.  
16 Q Okay. And so Dr. Parry's conclusion was:  
17 "In vitro evidence of genotoxic effect for Roundup  
18 mixture," right?

64. PAGE 61:24 TO 62:05 (RUNNING 00:00:19.209)

24 Q That was the conclusion that Dr. Parry  
25 came to?  
00062:01 A That was his conclusion, yes. Mm-hmm.  
02 Q Okay. And then next we looked at the --

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03 one of the Italian papers, which is Bolognesi, and

 0217-006 -



04 that was from a couple of years later in 1997, right?  
05 A Yes.

65. PAGE 62:13 TO 62:16 (RUNNING 00:00:10.796)

13 And his conclusions were Dr. Parry found  
14 a positive response in vitro SCE for both compounds.  
15 And the both compounds being glyphosate  
16 and Roundup, correct?

66. PAGE 62:20 TO 62:20 (RUNNING 00:00:01.368)

20 THE WITNESS: Yes.

67. PAGE 62:22 TO 63:08 (RUNNING 00:00:26.566)

22 Q Okay. So in -- in the Bolognesi test,  
23 the authors were studying both glyphosate and  
24 Roundup, correct?  
25 A That's correct.  
00063:01 Q Okay. So when Dr. Parry is talking in  
02 his conclusions about, quote, both compounds, he's  
03 referencing glyphosate and Roundup, correct?  
04 A Yes.  
05 Q Okay. So Dr. Parry -- Dr. Parry  
06 concluded that there was a positive response in vitro  
07 SCE for both glyphosate and Roundup, correct?  
08 A That's what it says.

68. PAGE 63:15 TO 63:17 (RUNNING 00:00:09.262)

15 Q And SCE is another marker looking at the  
16 structure of genetic material, correct?  
17 A That is sister chromatid exchanges.

69. PAGE 63:18 TO 63:23 (RUNNING 00:00:14.854)

18 Q Okay. And it --  
19 A This is an indicator top of test of which  
20 the biological mechanism is unknown and with some  
21 kind of experimental endpoint which was not accepted  
22 by regulatory authorities for assessment of  
23 genotoxicity.

70. PAGE 64:07 TO 64:10 (RUNNING 00:00:08.793)

07 Q Dr. Parry concluded that the response was  
08 at ten times lower concentration for Roundup mixture,  
09 correct?  
10 A That's what he said, yes.

71. PAGE 65:03 TO 65:14 (RUNNING 00:00:33.828)

03 Q Dr. Parry concluded that both glyphosate  
04 and Roundup mixture produced an increase in DNA  
05 strand breaks in mouse liver and kidney, correct?  
06 A That's what he says, yes.  
07 Q Okay. And next he found that glyphosate  
08 increased 8-OHdG in mouse liver, which is a marker of  
09 oxidative stress, correct?  
10 A Yes.  
11 Q Okay. And then he found that the Roundup  
12 mixture increased O dash -- or 8-OHdG in mouse liver  
13 and kidney, correct?  
14 A Yes.

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72. PAGE 65:20 TO 66:21 (RUNNING 00:01:06.328)

20 Q So he concluded oxidative stress --  
21 Dr. Parry concluded oxidative stress with respect to  
22 glyphosate and with respect to Roundup, correct?  
23 A Yes, that was what he concluded, yes.  
24 Q Okay. And this was in 1999, correct?  
25 A Yes.

 0217-007 -

00066:01 Q Okay. Next we're moving to the Peluso  
02 paper, which was one of the Italian papers we  
03 discussed, and we talk about the conclusion that  
04 Dr. Parry found for the Peluso paper. And that is  
05 that Roundup mixture produced an increase in DNA  
06 adducts in the mouse liver and kidney, correct?  
07 A Yes, that was what he concluded.  
08 Q Okay. And then let's move over to --  
09 A May I -- may I say --  
10 Q Sure.  
11 A -- something?  
12 He also concluded that there was no  
13 increase in the production of DNA adducts in the  
14 presence of glyphosate.  
15 Q Sure.  
16 A And that's important.  
17 Q That's fair. Okay. Sure.  
18 So -- so what you're saying is that he --  
19 he determined that with glyphosate there wasn't, but  
20 with Roundup mixture there was?  
21 A Yes.

73. PAGE 66:23 TO 67:11 (RUNNING 00:01:07.824)

23 Next if we turn to the Lioi 1998 paper,

 0217-008 -

24 and if you turn the page to 00 and you look at  
25 conclusions there, it looks that Dr. Parry found --  
00067:01 or Dr. Parry concluded that there was an increase in  
02 the chromatid aberrations of SCE following glyphosate  
03 exposure, correct?

 0217-009 -

04 A That is what he concluded, yes.  
05 Q Okay. Now if you turn to 01, we're  
06 talking about his conclusions still, and he found --  
07 Dr. Parry found sister chromatid exchanges induced in  
08 human lymphocytes by both glyphosate and Roundup  
09 mixture, correct?  
10 A That's what he found -- that's what he  
11 concluded, yes.

74. PAGE 67:13 TO 67:23 (RUNNING 00:00:25.134)

13 And he also concluded that the Roundup  
14 mixture produced a positive result at a lower  
15 concentration, correct?  
16 A That is what he concluded, yes.  
17 Q So Dr. Parry concluded that the Roundup  
18 mixture and the glyphosate alone would often produce  
19 different results, correct?  
20 A That indeed, yes.  
21 Q Okay. And this was back in 1999 that  
22 this was concluded, correct?

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23 A Yes.

75. PAGE 68:15 TO 68:23 (RUNNING 00:00:17.509)

15 Q And would you tell the jury, please, what  
16 "in vivo" means.  
17 A In vivo means that an experiment is  
18 carried out in live animals.  
19 Q Okay.  
20 A In whole organisms.

 0217-010 -



21 Q Okay. And in vivo is an accepted method  
22 of testing in toxicology, correct?  
23 A Yes.

76. PAGE 69:02 TO 69:08 (RUNNING 00:00:22.624)

02 Q So if we are looking at his -- at  
03 Dr. Parry's conclusions about in vivo studies, he  
04 states: "Both glyphosate and Roundup mixture  
05 produced positive results in the mouse bone marrow  
06 micronucleus assay," and then he cites a study that  
07 he has pulled that conclusion from, correct?  
08 A That's the Bolognesi study.

77. PAGE 69:11 TO 71:01 (RUNNING 00:01:18.373)

11 Q Then he -- if you go down to the next  
12 paragraph, it says: "The data of Bolognesi indicate  
13 that glyphosate is a probable in vivo genotoxin."  
14 Correct?  
15 A That is his conclusion.  
16 Q Correct. This is Dr. Parry's conclusion.  
17 A Yes.  
18 Q So Dr. Parry's conclusion in 1999 is that  
19 the data of the Bolognesi indicate that glyphosate is  
20 a probable in vivo genotoxin, correct?  
21 A What he wanted -- meant to -- what he  
22 meant to say is a potential.  
23 Q Well, he didn't say "potential," did he?  
24 A No, no. Well, but that's a question of  
25 wording; just to make sure that people understand it  
00070:01 right, that is a potential genotoxin.  
02 Q All right. Well, we'll never know if  
03 that's what he meant or not because he is not around  
04 to tell us that --  
05 A Exactly, mm-hmm.  
06 Q -- and he -- he was -- scientists are  
07 precise, correct?  
08 A He was a scientist, yes.  
09 Q And scientists -- when you're a  
10 scientist, you need to be precise with your words,  
11 correct?  
12 A Well, not in evaluative words. There may  
13 be a different choice of words, but yeah.  
14 Q Okay. But Dr. Parry chose not to put in  
15 the word "potential," correct?  
16 A He may have chosen as well "potential."  
17 Q Did you take out the word "potential"?  
18 A No.  
19 Q This is the form that the -- this is the  
20 form that it came in --  
21 A Oh, yeah.  
22 Q -- and he did not put "potential," did  
23 he?  
24 A No, no. He put the words as he put it.

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25 Q Okay.  
00071:01 A So we cannot change it.

78. PAGE 71:25 TO 73:03 (RUNNING 00:01:15.597)

0217-011 -



25 Q Okay. Next page, if you go to 03, it  
00072:01 says: "The overall" -- are you there?  
02 A Yeah.  
03 Q Okay. "The overall data provided by the  
04 four publications produce evidence to support a model  
05 that glyphosate is capable of producing genotoxicity,  
06 both in vivo and in vitro, by a mechanism based upon  
07 the production of oxidative damage."  
08 Is that Dr. Parry's conclusion in 1999?  
09 A Yes.  
10 Q That was given to Monsanto, correct?  
11 A Yes.  
12 Q Okay. And the question raised by these  
13 studies are that the -- this is what Dr. Parry is  
14 telling you and some of your toxicology expert  
15 colleagues, correct?  
16 A Mm-hmm.  
17 Q Is that the role of components of mixture  
18 which leads to high levels of activity of Roundup, he  
19 is questioning the genotoxic activity observed due to  
20 oxidative damage, correct? And the genotoxic -- and  
21 can that activity be reduced by anti -- antioxidants,  
22 correct?  
23 A Yes.  
24 Q So his recommendations and questions were  
25 kind of similar to what you said earlier was that  
00073:01 these studies raised new questions that needed to be  
02 studied, correct?  
03 A Yes, that's correct.

79. PAGE 73:04 TO 73:06 (RUNNING 00:00:04.403)

04 Q So you were in agreement with Dr. Parry  
05 that that's sort of what needed to happen, correct?  
06 A Right. Can I point --

80. PAGE 73:09 TO 73:22 (RUNNING 00:00:19.360)

09 THE WITNESS: Can I point to a sentence  
10 which is important --  
11 BY MS. WAGSTAFF:  
12 Q Sure.  
13 A -- which you didn't mention?  
14 Q Sure.  
15 A That he said -- you know, after you  
16 mentioned the sentence: "Based upon production of  
17 oxidative damage" --  
18 Q Yeah.  
19 A -- he said, "If confirmed."  
20 Q Mm-hmm.  
21 A So that means that he has a hypothetical  
22 conclusion and he was seeking confirmation.

81. PAGE 73:25 TO 74:09 (RUNNING 00:00:12.121)

25 Q Doctor, that's fair, because -- and  
00074:01 that's confirmed when it says raised -- questions  
02 raised by the study --  
03 A Mm-hmm. Right.  
04 Q -- he is saying that there is more

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05 questions and more tests that need to be done, which  
06 is what you had said when we started --  
07 A Yes.  
08 Q -- talking about this, correct?  
09 A That's correct.

**82. PAGE 74:10 TO 74:24 (RUNNING 00:00:58.639)**

10 Q So you were in agreement with Dr. Parry?  
11 A Yes. In that sense, yes.  
12 Q Okay. All right. And in fact, if you

 0217-012 -



13 turn to 04, which is the next page, this paper is  
14 signed by Dr. Parry.  
15 And actually, B, Dr. Parry recommends  
16 that there be tests to determine if -- he recommends  
17 that there is an assessment of the individual  
18 components of Roundup mixture to determine whether  
19 there is any components which act synergistically to  
20 increase the potential genotoxicity of glyphosate.  
21 So let's unpack that sentence a little  
22 bit since you're an expert in toxicology. Can you  
23 explain to me what it means when components act  
24 synergistically?

**83. PAGE 74:25 TO 75:04 (RUNNING 00:00:07.360)**

25 A When components act -- this is a  
00075:01 hypothesis --  
02 Q Yeah, yeah.  
03 A -- put forward by Dr. Parry.  
04 Q I just want to know what synergistic --

**84. PAGE 75:05 TO 75:07 (RUNNING 00:00:08.253)**

05 A Yes. That means that one component is  
06 over -- inclined to strengthen the toxicological  
07 effect of another component of the synergism.

**85. PAGE 75:23 TO 76:04 (RUNNING 00:00:13.803)**

23 Q And I'm asking -- we're talking  
24 hypothetically still. I'm not asking you what  
25 Dr. Parry meant because we can all read the same  
00076:01 words on the paper. I'm saying --  
02 A Well, I give you an example --  
03 Q Okay.  
04 A -- just to clarify.

**86. PAGE 76:05 TO 76:22 (RUNNING 00:00:42.802)**

05 A synergistic effect may be, for example,  
06 if a co-formulant produces an inflammatory process,  
07 that inflammatory process produces free oxygen  
08 radicals. If there is a slight synergism with the  
09 other component, then you may have some kind of a  
10 combined effect that may be more prominent than the  
11 effects caused separately.  
12 Q Okay. That makes sense.  
13 And so Dr. Parry is suggesting an  
14 assessment of the individual components of the  
15 Roundup mixture, which you have already told me are  
16 the active ingredient, which is glyphosate and some  
17 surfactants, correct?  
18 A Yes, that's correct.  
19 Q Okay. So he's -- he's saying assess  
20 those components to see if they act synergistically

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21 when they are together, correct?  
22 A Right. Yes.

**87. PAGE 76:23 TO 77:03 (RUNNING 00:00:11.476)**

23 Q All right. And -- and this is a -- these

 -KE0217-012 - Clear Attached Exhibit 0217-012

24 are all conclusions and recommendations that were  
25 sent to Monsanto toxicologists in February of 1999,  
00077:01 correct?  
02 A Yes.  
03 Q Okay.

**88. PAGE 77:09 TO 77:10 (RUNNING 00:00:04.425)**

09 THE WITNESS: Can I -- can I -- can I  
10 just say something?

**89. PAGE 77:15 TO 77:24 (RUNNING 00:00:13.325)**

15 Q Okay. All right.  
16 A There is something that is very important  
17 to mention --  
18 Q Uh-huh.  
19 A -- also in -- in the report of Dr. Parry  
20 is that he also lists the flaws of the studies that  
21 they've been published. So --  
22 Q Sure.  
23 A Okay. So it's important you are aware of  
24 this.

**90. PAGE 79:02 TO 79:13 (RUNNING 00:00:43.994)**

02 Q And it -- it was February 15th of 1999,

 0218 -

03 and so here what I have marked as Exhibit 5 is an  
04 e-mail from Dr. Donna Farmer. If you look at the  
05 page that starts with 06 is the e-mail cascade. And  
06 it is -- although it is written on April 19th, Donna  
07 Farmer states that these are the meeting minutes from  
08 February 25th, correct?  
09 A Yes.  
10 Q Okay. So this is actually a meeting that  
11 occurred ten days after Dr. Parry had -- and you had  
12 circulated the Parry report, correct?  
13 A Correct.

**91. PAGE 80:03 TO 80:20 (RUNNING 00:00:59.483)**

03 Q So you guys have now had this report for  
04 about ten days, and you are meeting to discuss the  
05 next step, correct?

 0218-003 -

06 A Yes.  
07 Q Okay. And Dr. Farmer reiterates to you  
08 all that: "Dr. Parry concluded on his evaluation of  
09 the four articles that glyphosate is capable of  
10 producing genotoxicity, both in vivo and in vitro, by  
11 a mechanize -- by a mechanism based upon the  
12 production of oxidative damage." Correct?  
13 A That's correct.  
14 Q Okay. And we had talked about that  
15 before. And that evaluation was based on material



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16 that you all had provided Dr. Parry, correct?  
17 A Yes.  
18 Q Okay. And was Dr. Farmer and was the  
19 group of people that met happy with Dr. Parry's  
20 report?

92. PAGE 80:22 TO 80:22 (RUNNING 00:00:01.828)

22 THE WITNESS: No.

93. PAGE 82:15 TO 83:14 (RUNNING 00:01:05.548)

15 Q All right. So moving on, Dr. Farmer  
16 continues to say: "As a follow-up, Mark will contact  
17 Dr. Parry, discuss with him the existence of  
18 additional data, and ask him to evaluate the full  
19 package."  
20 Mark is you, correct?  
21 A Yes.  
22 Q Mark is Dr. Mark Martens. Okay.  
23 "Mark will also explore his interests,"  
24 meaning Dr. Parry's interests, parentheses, "if we  
25 can turn his opinion around, in being a spokesperson  
00083:01 for us on these types of issues." Correct?  
02 A That's correct.  
03 Q Okay. So, Dr. Martens, you were tasked  
04 with following up with Dr. Parry and getting him  
05 additional data to see if you could turn his opinion  
06 around, correct?  
07 A I will rephrase that. It was actually  
08 providing, you know, supplementary data so that he  
09 could put that in his findings into a context of the  
10 existing data.  
11 Q Right. And turn his opinion around,  
12 correct? It's the words that Donna Farmer used, not  
13 me.  
14 A These are the words of Donna Farmer.

94. PAGE 85:02 TO 85:03 (RUNNING 00:00:03.610)

02 MS. WAGSTAFF: This is going to be marked

 0270 -

03 as Exhibit 6.

95. PAGE 85:12 TO 85:15 (RUNNING 00:00:11.946)

12 Q Okay. So were you aware that the  
13 toxicologists that were in the United States thought  
14 that you did not do a good job with Dr. Parry?  
15 A No.

96. PAGE 85:18 TO 85:21 (RUNNING 00:00:08.707)

18 Q Okay. Were you aware that they no longer  
19 wanted you to be the one interacting with Dr. Parry  
20 after his report came out?  
21 A No.

97. PAGE 86:01 TO 86:19 (RUNNING 00:00:54.615)

 0270-002 -

00086:01 Who is Stephen Wratten?  
02 A Stephen Wratten was a -- a product  
03 registration manager in the United States.  
04 Q Okay.  
05 A In charge of glyphosate.

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---

06 Q Okay. And so Steve Wratten writes an  
07 e-mail on October 31st, 1999, which is a few months  
08 after Dr. Parry had given you his report, correct?  
09 A Yes.  
10 Q And he writes an e-mail, and it's called  
11 "Comments on Parry write-up," and he writes the  
12 e-mail to you, to Donna Farmer, to Dr. Larry Kier,  
13 who we talked about.  
14 A Mm-hmm.  
15 Q We talked about Will -- Bill Heydens, and  
16 then who's -- who's William Graham?  
17 A Graham, William, is -- was the -- the  
18 glyphosate product registration manager for Europe,  
19 Africa.

**98. PAGE 87:06 TO 87:21 (RUNNING 00:00:42.601)**

06 So Dr. Wratten writes to Mark, that's  
07 you, and Donna, which is Dr. Farmer, and says --  
08 talking about comments on the Parry write-up: "I was  
09 somewhat disappointed in the Parry report."  
10 Do you see that?  
11 A Yes.  
12 Q Okay. And Dr. Wratten says: "Not  
13 particularly with his conclusions but just the way  
14 that they're presented." Correct?  
15 A Yes, I see that.  
16 Q Okay. And then he goes on to provide --  
17 one, two, three, four, five, six, seven, eight --  
18 eight suggestions on how he can improve his report;  
19 is that correct?  
20 A Well, these were comments. I see them as  
21 comments.

**99. PAGE 88:02 TO 88:07 (RUNNING 00:00:12.551)**

02 Okay. So -- so Dr. Wratten writes that  
03 he's not particularly disappointed in the conclusions  
04 but just the way they're presented, and he gives  
05 eight comments on how to improve the Parry report,  
06 correct?  
07 A To some extent, yes.

**100. PAGE 88:08 TO 88:13 (RUNNING 00:00:23.589)**

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08 Q Okay. And then at the very end, Steve  
09 Wratten writes, and still talking about the Parry  
10 report: "I do not see that he has stuck his neck out  
11 at anything at all controversial, and therefore there  
12 is little value in the write-up as written that could  
13 be useful. Hope it didn't cost much."

**101. PAGE 88:15 TO 89:07 (RUNNING 00:01:00.021)**

15 "Perhaps this is too harsh, and I don't  
16 know what your proposal to him was, but I would --  
17 but I guess I would expect more than this of a  
18 professor." Correct?  
19 A That's what he said, yes.  
20 Q Okay. And did that upset you receiving  
21 that e-mail?  
22 A Not really.  
23 Q No.  
24 A Because I was also a little bit

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25 disappointed about the form of the report.  
00089:01 Q Okay. So he also asks you and Dr. Farmer  
02 if Dr. Parry has ever worked with industry before on  
03 this sort of project, correct?

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04 A That -- that's what we can read, yes.  
05 Q Okay. And so he sends this to -- Donna  
06 Farmer then forwards the e-mail to Alan Wilson.  
07 A Yes, that's what I see.

102. PAGE 89:11 TO 89:17 (RUNNING 00:00:20.843)

11 Q Okay. And Alan Wilson writes back to  
12 Dr. Farmer and says: "Two options: We work closely  
13 with Parry, someone other than Mark, or we get  
14 someone else."  
15 So basically take Mark off the job or we  
16 use someone other than Dr. Parry, correct?  
17 A That's what I read.

103. PAGE 89:24 TO 90:04 (RUNNING 00:00:20.760)

24 Q Okay. And so then Donna Farmer responds  
25 to Alan Wilson's suggestions and says: "One option:  
00090:01 I agree we need someone else to interfere --  
02 interface with Parry."  
03 Meaning she agrees that -- that you  
04 should be off the job. Correct?

104. PAGE 90:07 TO 90:08 (RUNNING 00:00:02.687)

07 THE WITNESS: That is what appears from  
08 that.

105. PAGE 90:10 TO 90:17 (RUNNING 00:00:14.820)

10 Q Okay. "Right now the only person I think  
11 that can dig us out of this genotox hole is the good  
12 Dr. Kier."  
13 And that's Dr. Larry Kier?  
14 A Yes.  
15 Q And that's the Monsanto -- long-term  
16 Monsanto toxicologist, right?  
17 A Yes. Yes. Genotoxicologist.

106. PAGE 90:19 TO 91:02 (RUNNING 00:00:22.020)

19 And Dr. Farmer goes on to say that she's  
20 concerned about leaving the report out there as the  
21 final project with his final impressions, correct?  
22 A That's what I read.  
23 Q Okay. So she doesn't -- it looks like  
24 she doesn't want to just ignore the project, she  
25 wants to make sure it gets cleaned up so it's not the  
00091:01 final project, right?  
02 A That's what I read.

107. PAGE 91:14 TO 91:21 (RUNNING 00:00:20.483)

14 Q All right. And then Alan writes back to  
15 Donna, Dr. Farmer, and says: "If Larry has the time,  
16 that would be great, but we need to be careful we  
17 don't get into another Cantox situation that could  
18 take some word -- take some time wordsmithing and  
19 reaching consensus."



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20 Do you know what that means?  
21 A I have no idea.

**108. PAGE 91:22 TO 91:25 (RUNNING 00:00:10.348)**

22 Q And then says: "Maybe you should invite  
23 Parry to St. Louis to get him more familiarized with  
24 the complete database." Correct?  
25 A That's what I read.

**109. PAGE 92:06 TO 92:09 (RUNNING 00:00:12.233)**

06 Q Two -- two -- two toxicologists from the  
07 United States have said that you should be pulled off  
08 the project, and then they're inviting the European

 -KE0270 - Clear Attached Exhibit 0270

09 expert to St. Louis and not inviting you, are they?

**110. PAGE 92:12 TO 92:12 (RUNNING 00:00:02.227)**

12 THE WITNESS: That is a possibility.

**111. PAGE 92:22 TO 92:23 (RUNNING 00:00:08.823)**

22 Q All right. And then our next exhibit

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23 will be Exhibit 7.

**112. PAGE 92:24 TO 93:02 (RUNNING 00:00:18.383)**

24 This is the same e-mail that Dr. Wratten  
25 wrote to you and Donna that we were just looking at,  
00093:01 to you and Dr. Farmer, and you have interplaced your  
02 responses in italics.

**113. PAGE 93:21 TO 94:16 (RUNNING 00:01:02.329)**

21 Q How many reports did Dr. Parry write for  
22 Monsanto?  
23 A I think he wrote -- there was three  
24 reports.  
25 Q Okay.  
00094:01 A Yeah. And the first report was only  
02 evaluating the four publications that I had sent to  
03 him that had problematic results.  
04 And then afterwards I learned ^ Check to  
05 put everything into a nice context and to see whether  
06 there is concordance in results with other toxicology  
07 tests. I sent him a whole battery of -- of test  
08 reports which have been as well, you know, produced  
09 upon commission by Monsanto but also from some other  
10 companies, to allow him to put it into context. So  
11 he evaluated all these reports, and there is in the  
12 report.  
13 And there is a third notice that he  
14 produced as well as a follow-up of that report on the  
15 evaluation of all the toxicology studies in  
16 combination.

**114. PAGE 95:02 TO 95:10 (RUNNING 00:00:22.987)**

02 Q Okay. So you received this e-mail from  
03 Dr. Wratten on September 1st of 1999 where he's  
04 talking about how he is disappointed not in the  
05 conclusions but in the way they were presented,  
06 correct?



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07 A Mm-hmm.  
08 Q And you write back some remarks to  
09 Dr. Wratten within his e-mail, correct?  
10 A Yes.

115. PAGE 95:11 TO 95:23 (RUNNING 00:00:34.133)

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11 Q Okay. And the bottom line is you say to  
12 him, you say to Dr. Wratten: "Please don't be too  
13 negative. It is clear he will need some help to  
14 produce a definitive report without twisting his  
15 arms. Don't forget that his opinion is well  
16 respected, and I am sure he didn't have the time to  
17 write it all down as should have been the case;  
18 therefore, the need to meet with him." Correct?  
19 A Yes.  
20 Q So you still believed in Dr. Parry and  
21 this was your work in generating this report,  
22 correct?  
23 A Yes.

116. PAGE 96:03 TO 96:11 (RUNNING 00:00:21.622)

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03 Q Okay. And then you look at the response  
04 that you wrote to the entire group where you say  
05 that: "We can now determine for ourselves how such  
06 report should look like and give him directions for a  
07 rewrite."  
08 So you were going to go to Dr. Parry and  
09 give him directions for a rewrite of his report,  
10 correct?  
11 A Yep.

117. PAGE 96:12 TO 96:14 (RUNNING 00:00:05.113)

12 Q Okay.  
13 A These were directions for the form of the

 -KE0219 - Clear Attached Exhibit 0219



14 report, not of the content of the report.

118. PAGE 97:03 TO 97:07 (RUNNING 00:00:13.417)

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03 This is a report by Dr. James M. Parry, correct?  
04 A Yes.  
05 Q This is the same Parry that wrote the  
06 February 1999 report.  
07 A Yes.

119. PAGE 97:09 TO 97:23 (RUNNING 00:00:31.697)

09 And this is the "Evaluation of the  
10 potential genotoxicity of glyphosate, glyphosate  
11 mixtures in component surfactants," correct?  
12 A Yes.  
13 Q So it's the same subject matter area,  
14 right?  
15 A Yes.  
16 Q And this is the area you have previously

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17 testified that Dr. Parry is an expert, right?  
18 A Yes.  
19 Q Okay. And you had mentioned a few  
20 moments ago that you gave Dr. Parry a host of  
21 information to review, and it looks like this table  
22 is what -- the information you gave him, correct?  
23 A Correct.

120. PAGE 98:10 TO 98:16 (RUNNING 00:00:32.722)

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10 Q -- that ends -- we're going to go to the  
11 one that ends 37, 237, please. Where it says that:  
12 "The evaluation is that these studies provide some  
13 evidence that glyphosate may be capable of inducing  
14 oxidative damage under both in vitro and in vivo  
15 conditions."  
16 That was his evaluation, correct?

121. PAGE 98:21 TO 98:21 (RUNNING 00:00:02.490)

21 A That is what's in the report. Yes.

122. PAGE 98:25 TO 99:15 (RUNNING 00:01:04.354)

25 Q Okay. And this is consistent with his  
00099:01 February of 1999 conclusion, correct?  
02 A The -- the conclusion evaluation he  
03 formulated on page 237, pertains to the chapter in  
04 "Miscellaneous Endpoints."  
05 Q Okay. Miscellaneous -- okay.  
06 A And miscellaneous endpoints are endpoints  
07 that have been pursued by groups, you know, in  
08 academia that have been -- actually undertaken  
09 experimental tests in all of the mechanism of  
10 actions. These were endpoints that were not pursued  
11 in the official regulatory studies that were done at  
12 Monsanto at that time.  
13 Q Okay. So --  
14 A It's not a general evaluation. It's only  
15 pertaining to miscellaneous endpoints.

123. PAGE 100:16 TO 100:20 (RUNNING 00:00:09.421)

16 Q But my question is, is this the same  
17 conclusion -- that I had asked five minutes ago, is  
18 this the same conclusion that he made in his February  
19 of '99 paper?  
20 A Yes.

124. PAGE 100:24 TO 101:04 (RUNNING 00:00:27.370)

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24 Q And then if you go to page end -- or  
25 page 40, please, where it says his evaluation is  
00101:01 that: "These studies provide evidence that Roundup  
02 mixture produces DNA lesions in vivo, probably due to  
03 the production of oxidative damage."  
04 That was his evaluation, correct?

125. PAGE 101:07 TO 101:07 (RUNNING 00:00:02.152)

07 THE WITNESS: Yes.

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126. PAGE 102:05 TO 102:21 (RUNNING 00:00:44.937)

05 THE WITNESS: It's very important to  
06 mention that there are some miscellaneous endpoints  
07 which gave some, you know, results of concern have  
08 been obtained in vivo via routes of administration  
09 which are improper for toxicological testing for  
10 glyphosate -- exposure scenarios of glyphosate.  
11 This all pertains to results that have  
12 been obtained after intraperitoneal injection, which  
13 actually produces a specific pathology that otherwise  
14 would have never be possible, you know, in normal  
15 exposure circumstances to either glyphosate or  
16 Roundup.  
17 BY MS. WAGSTAFF:  
18 Q Okay. Thank you.  
19 And the intraperitoneal injection is an  
20 acceptable route of exposure for a health hazard  
21 assessment, correct?

127. PAGE 102:23 TO 103:03 (RUNNING 00:00:12.016)

23 THE WITNESS: No.  
24 BY MS. WAGSTAFF:  
25 Q It's not. It's not accepted within the  
00103:01 field of toxicology as a -- a relevant route of  
02 exposure for health hazard assessment? Is that what  
03 you're telling me?

128. PAGE 103:06 TO 103:12 (RUNNING 00:00:19.769)

06 THE WITNESS: This is not a relevant  
07 route of exposure. This can be used in order to  
08 produce some results to explore potential effects  
09 that can be produced during that route of exposure,  
10 but that route of exposure is absolutely  
11 inappropriate for the hazard and risk assessment of  
12 pesticides.

129. PAGE 103:14 TO 103:18 (RUNNING 00:00:16.911)

14 Q Okay. All right. So overall

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15 conclusions -- "Overall Conclusions," let's look at  
16 it, page 42.  
17 What does class -- clastogen -- genetic  
18 mean?

130. PAGE 103:21 TO 104:10 (RUNNING 00:00:49.310)

21 A Clastogenicity means chromosomal  
22 breakage.  
23 Q Okay. So once again, it's talking about  
24 mutation, right?  
25 A We like to talk about gene mutations and  
00104:01 chromosomal breakage, and these all resort under the  
02 term "genotoxicology."  
03 Q Okay. So the overall conclusions, when  
04 you've given Dr. Parry more information, is there is  
05 published in vitro evidence that glyphosate is  
06 clastogenetic and capable of inducing sister  
07 chromatid exchange in both human and bovine  
08 lymphocytes, and then he cites papers, correct?

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09 A Correct.



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10 Q And if you move on to the next page, page

131. PAGE 104:15 TO 104:20 (RUNNING 00:00:16.611)

15 the production of 8-OHdG in mouse liver, cites a  
16 paper; both observations indicate that glyphosate may  
17 be capable of inducing a prooxidant state leading to  
18 the formation of oxidative damage lesion.

19 Correct?

20 A That's a correct --

132. PAGE 104:25 TO 106:03 (RUNNING 00:01:23.259)

25 Q The next conclusion was that a -- of  
00105:01 Dr. Parry was that: "A Roundup mixture containing  
02 glyphosate was shown to produce 8-OHdG in both the  
03 liver and kidney of the mice (Bolognesi). These  
04 observations indicate the Roundup mixture is capable  
05 of inducing oxidative damage in vivo."

06 Is that correct?

07 A That's what he wrote is correct, yes.

08 Q Okay. And this is -- that's consistent  
09 with what he found in the February '99 report that  
10 he --

11 A Yes.

12 Q Okay. Next on 14, glyphosate-induced  
13 single-strand breaks in vivo in the liver and kidney,  
14 and he cited those reports, correct?

15 A Yes.

16 Q Next, he tells Monsanto that the Roundup  
17 mixture produced single-strand breaks in vivo in the  
18 liver and kidneys of mice, correct?

19 A Correct.

20 Q Okay. And next, he tells -- Dr. Parry  
21 tells Monsanto that glyphosate mixture but not  
22 glyphosate produced an increase in uncharacterized  
23 DNA adducts in vivo in the liver and kidneys of mice,  
24 correct?

25 A That's correct.

00106:01 Q All right. So Dr. Parry is telling  
02 Monsanto that there are differences between  
03 glyphosate alone and a glyphosate mixture, correct?

133. PAGE 106:06 TO 106:06 (RUNNING 00:00:01.310)

06 A That's what he said generally.

134. PAGE 106:09 TO 106:10 (RUNNING 00:00:07.018)

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09 Q If you go to the next page, "Specific  
10 evaluation of the genotoxicity of glyphosate."

135. PAGE 106:23 TO 107:02 (RUNNING 00:00:11.839)

23 So we can start -- the sentence says:  
24 "On the basis of the study of Lioi, I conclude that  
25 glyphosate is a potential clastogenic in vitro."

00107:01 Correct?

02 A That's what he says, yes.

136. PAGE 107:03 TO 107:05 (RUNNING 00:00:11.731)

03 Q Okay. And then he goes on to say that  
04 the Bolognesi study indicates that it may also be  
05 clastogenic in vivo, correct?

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**137. PAGE 107:06 TO 107:11 (RUNNING 00:00:09.649)**

06 A It may be, yes. The way he --  
07 Q Correct.  
08 A Yeah.  
09 Q So he concludes that it is in vitro and  
10 that it may be in vivo, correct?  
11 A It's hypothetical in vivo. Yeah.

**138. PAGE 107:13 TO 107:22 (RUNNING 00:00:24.137)**

13 And then he goes on the -- so that was  
14 the genotoxicity of glyphosate. Now he's looking at  
15 the geno -- specific evaluation of the genotoxicity  
16 of glyphosate mixtures, correct?  
17 A Mm-hmm.  
18 Q Okay. And he says: "The studies of  
19 Bolognesi suggests that glyphosate mixtures may be  
20 capable of inducing oxidative damage in vivo."  
21 Correct?  
22 A Yes, that's what he says.

**139. PAGE 108:22 TO 108:24 (RUNNING 00:00:05.560)**

22 Q So he was just putting Monsanto on notice  
23 that this may be happening, correct?  
24 A Yes.

**140. PAGE 109:06 TO 109:07 (RUNNING 00:00:04.960)**

06 what we're going to skip to. We're going to skip to

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07 page 64.

**141. PAGE 110:05 TO 110:23 (RUNNING 00:00:36.903)**

05 Q Is -- is this the third report that you  
06 were talking about?  
07 A Yes.  
08 Q Okay. So this came after the first two,  
09 correct?  
10 A That -- that's what I understand, yes.  
11 Q Okay. And this is the same Dr. Parry  
12 that you were -- that we've been talking about all  
13 day, correct?  
14 A Yes, correct.  
15 Q Okay. And do you know what the genesis  
16 of this report was, why he created this?  
17 A I don't recall it.  
18 Q Okay. But he created this at -- at  
19 Monsanto's request, correct?  
20 A That is a possibility. I don't recall.  
21 Q Okay. And is there any chance that this  
22 was linked to the second report?  
23 A Yes.

**142. PAGE 112:03 TO 112:07 (RUNNING 00:00:07.409)**

03 Q And then this one is either an annex to  
04 his second report or it's a third report?  
05 A Yes.  
06 Q You're just not sure.  
07 A Yes.

**143. PAGE 112:18 TO 112:20 (RUNNING 00:00:04.603)**

18 And then this says "Recommendations for  
19 Future Work," correct?

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20 A Yes.

144. PAGE 112:25 TO 114:13 (RUNNING 00:02:11.564)

25 Q Okay. So it appears to me that this is  
00113:01 recommendations for future work based off of his  
02 analysis in the second report. Would that make  
03 sense?  
04 A That makes sense, yes.  
05 Q Okay. So key questions, and these are  
06 key questions that he is posing to Monsanto that  
07 still remain after his analyses, correct?  
08 A Yes.  
09 Q Okay. So he's wanting to know if  
10 glyphosate is an in vitro clastogen, if it's an  
11 in vivo clastogen, if glyphosate is -- if that is  
12 true, what is the mechanism of action? And does it  
13 lead to other types of genotoxicity activity in vivo  
14 such as point mutation induction? Does glyphosate  
15 produce oxidative damage? Can we explain the  
16 reported genotoxic effects of glyphosate on the basis  
17 of the induction of oxidative damage?  
18 Why don't you read the last three so the  
19 jury doesn't have to just listen to my voice,  
20 starting with 6. You can read it out loud.  
21 A Okay. So if glyphosate is an in vivo  
22 genotoxin, is its mechanism of action thresholded?  
23 Q Okay. Number 7.  
24 A "Threshold," it wants to say that you  
25 need to have a certain concentration in tissue before  
00114:01 that activity takes place.  
02 Q Mm-hmm.  
03 A "Under what conditions of exposure are  
04 the antioxidant defenses of the cell overwhelmed?"  
05 Q Okay.  
06 A That is part of the thresholding.  
07 "Are there difference -- differences in  
08 the genotoxic activities of glyphosate and glyphosate  
09 formulations?"  
10 Q So he's -- he's been telling you in the  
11 last two reports that different things happen when he  
12 tests glyphosate or glyphosate formulations, right?  
13 A Yes.

145. PAGE 114:16 TO 115:19 (RUNNING 00:01:21.828)

16 Q And then the last one.  
17 A "Do any of the surfactants contribute to  
18 the reported genotoxicity of glyphosate  
19 formulations?"  
20 Q Okay. So he's saying we need to figure  
21 out what the surfactants add to the equation,  
22 correct?

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23 A Yes.  
24 Q Okay. So he also then gives you --  
25 Monsanto some actions that he recommended, correct?  
00115:01 A Yes.  
02 Q Okay. And one of those is to do  
03 comprehensive testing on glyphosate formulations,  
04 correct?  
05 A Yes.  
06 Q Okay. He says that -- that "Monsanto  
07 should evaluate the induction of oxidative damage  
08 in vivo and determine the influence of antioxidant

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09 status of the animals." Correct?  
10 A Correct.  
11 Q He also says: "Evaluate -- on the  
12 assumption that the reported in vitro positive  
13 clastogenic data for glyphosate is due to oxidative  
14 damage, determine the influence of antioxidants."  
15 Okay. So that's similar to the next one.  
16 "Evaluate the clastogenic activity of glyphosate in  
17 the presence and absence of a variety of antioxidant  
18 activities." Correct?  
19 A That's what I read, yes.

146. PAGE 116:17 TO 117:03 (RUNNING 00:00:25.626)

17 Dr. Parry gave a list of eight questions  
18 that were left unanswered, correct?  
19 A That he would like to see answered, yes.  
20 Q Okay. And as a scientist, you would have  
21 liked to see those answered as well, correct?  
22 A These were genuine questions, yes.  
23 Q Yeah. Good questions, right?  
24 A These were good questions, yes.  
25 Q Okay. And he provided with a list of  
00117:01 actions that Monsanto could take to answer those  
02 questions, correct?  
03 A Yes.

147. PAGE 117:06 TO 117:25 (RUNNING 00:01:01.241)

06 So then Dr. Parry says at the very end of

 0220-034 -

07 his recommendations: "My overall view is that if  
08 there is -- my overall view is that if the reported  
09 genotoxicity of glyphosate and glyphosate  
10 formulations can be shown to be due to the production  
11 of oxidative damage, then a case could be made that  
12 any genetic damage would be threshold."  
13 Did I read that correctly?  
14 A You read it, yes.  
15 Q Okay. "Such genetic damage would only be  
16 biologically relevant under conditions of compromised

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17 anti -- antioxidant status. If such an oxidative  
18 damage mechanism is proved, then it may be necessary  
19 to consider the possibility of the susceptible groups  
20 within the human population."  
21 Did I read that correctly?  
22 A You read that correctly, yes.  
23 Q Okay. So there is an expert telling  
24 Monsanto in 1999 to do tests that may affect the  
25 human population, correct?

148. PAGE 118:03 TO 119:12 (RUNNING 00:01:16.329)

03 THE WITNESS: This is a little bit an

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04 expanded conclusion. You know, he is more or less  
05 asking himself the question. If that might be true,  
06 then there may be susceptible groups in a population  
07 that might be more susceptible in producing an  
08 effect. But he forgets to say those effects have  
09 been, you know, obtained through intraperitoneal

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10 injection, whereas the human exposure is not via  
11 intraperitoneal injection. And that's a very  
12 important nuance.

13 BY MS. WAGSTAFF:

14 Q So I don't -- how do you know he forgot  
15 to say that?

16 A I don't know why he didn't point it out.  
17 That's why --

18 Q But he didn't point it out, did he?

19 A Intra -- well, that is limited to  
20 intraperitoneal injection. Not sufficiently --

21 Q So you may -- you may not agree with  
22 what Dr. Parry wrote, but I'm not asking you to  
23 rewrite his report.

24 I'm asking you in 1999, Dr. Parry wrote  
25 to Monsanto and -- and did an analysis, gave  
00119:01 questions unanswered, right?

02 A Yes.

03 Q Proposed actions that could be taken,  
04 right?

05 A Yes.

06 Q And then stated that the over -- his  
07 overall view is that these tests and answers need to  
08 be taken, right?

09 A Yes.

10 Q And then you need to figure out what --  
11 what group within the human population may be  
12 affected, correct?

**149. PAGE 119:15 TO 119:16 (RUNNING 00:00:02.485)**

15 THE WITNESS: That -- that is what he  
16 said.

**150. PAGE 119:18 TO 119:24 (RUNNING 00:00:09.065)**

18 THE WITNESS: But I don't agree with what  
19 he said because --

20 BY MS. WAGSTAFF:

21 Q That's -- you can -- that's fine if you  
22 don't agree with what he said. I'm just -- that's  
23 what he told Monsanto, correct?

24 A That's what he told Monsanto, yes.

**151. PAGE 121:02 TO 121:07 (RUNNING 00:00:22.436)**

02 And so that -- that second Parry report,  
03 which was the longer one, was sent to you sometime  
04 around September of 1999. And you had sent it to  
05 Larry Kier, Dr. Donna Farmer, and Bill Heydens around  
06 that time, correct?

07 A Correct.

**152. PAGE 121:16 TO 121:22 (RUNNING 00:00:15.300)**

 0221 -



16 Q So you write to Larry and Donna -- which  
17 would be Larry Kier and Donna Farmer, correct?

18 A Correct.

19 Q -- on September 16, 1999: "I would like  
20 to get some feedback to Jim Parry on his report."  
21 Correct?

22 A Correct.

**153. PAGE 122:03 TO 122:09 (RUNNING 00:00:18.685)**

03 Q So you're asking these folks for their

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04 opinions so you can get some feedback to Dr. Parry,  
05 correct?  
06 A That was the intention, yes.  
07 Q Okay. And you cc'd Dr. Bill Heydens on  
08 that e-mail, right?  
09 A Yeah, that's what I see.

**154. PAGE 122:20 TO 123:14 (RUNNING 00:00:55.069)**

20 Q "Mark, all" -- and Mark is you,  
21 Dr. Martens, correct?  
22 A That's correct, yes.  
23 Q Okay. He lets you know that he has read  
24 the report and he agrees with the comments, right?  
25 A Yes.  
00123:01 Q And there are various things that can be  
02 done to improve the report. So, again, they're not  
03 completely happy with the report, correct?  
04 A Yes.  
05 Q Okay. And then he says: "Let's step  
06 back and look at what we're really trying to achieve  
07 here." Right?  
08 A That's in the -- in the mail, yes.  
09 Q Okay. He states that: "Monsanto wants  
10 to find/develop someone who is comfortable with the  
11 genotox profile of glyphosate/Roundup and who can be  
12 influential with regulators and scientific outreach  
13 operations when genotox issues arise." Correct?  
14 A That's what I read, yes.

**155. PAGE 123:23 TO 125:09 (RUNNING 00:01:33.976)**

23 BY MS. WAGSTAFF:  
24 Q Okay. And Bill Heydens is a toxicologist  
25 in the United States, correct?  
00124:01 A Yes.  
02 Q For Monsanto, correct?  
03 A Yes.  
04 Q Okay. Dr. Heydens goes on to say: "My  
05 read is that Parry is not currently such a person,  
06 and it would take quite some time and" money sign,  
07 money sign, money sign, slash, "studies to get him  
08 there." Correct?  
09 A That's what I read, yes.  
10 Q Okay. "We simply aren't going to do the  
11 studies that Parry suggests, period." Correct?  
12 A That's what he said in the memo, yes.  
13 Q Okay. Then he directs the e-mail to you  
14 specifically. "Mark, do you think Parry can become a  
15 strong advocate without doing this work?" Parry,  
16 question mark. Then he says: "If not, we should  
17 seriously," underlined, italicized, bolded, "start  
18 looking for one or more other individuals to work  
19 with." Correct?  
20 A That's what I read, yes.  
21 Q Okay. Then he goes on to say: "We have  
22 not made much progress and are currently very  
23 vulnerable in this area." Correct?  
24 A That's what I read.  
00125:01 Q Okay. And "this area" means the  
02 genotoxicity of glyphosate/Roundup, correct?  
03 A That is correct.  
04 Q "We have to fix that" -- "that" being the  
05 vulnerability -- "but only if we make this a high  
06 priority now." Correct?  
07 A That's what I read.  
08 Q Okay. So -- and that is in September of

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08 1999, correct?  
09 A Yes. That seems correct, yeah.

**156. PAGE 125:11 TO 125:14 (RUNNING 00:00:13.265)**

11 Did you have any independent

 -KE0221 - Clear Attached Exhibit 0221



12 conversations with Dr. Heydens as to why he did not  
13 want to do the studies Parry suggested?  
14 A I don't recall.

**157. PAGE 125:18 TO 125:24 (RUNNING 00:00:16.836)**

18 Q Did Dr. Parry ever offer to do the  
19 studies he was suggesting?  
20 A He had the intention to do some work,  
21 yes.  
22 Q When you say "he had the intention to do  
23 some work" --  
24 A That's what he was suggesting.

**158. PAGE 126:04 TO 127:05 (RUNNING 00:00:58.148)**

04 So when you say Dr. Parry had the  
05 intention to do the work he suggested, what do you  
06 mean -- do you mean that he wanted to do the work he  
07 suggested?  
08 A Well, in his laboratory -- it's a typical  
09 academic laboratory, he's a professor of the  
10 department with Ph.D. students -- and he was  
11 exploring the mechanism of oxidative stress and  
12 oxidative damage, and he had some ideas about Ph.D.  
13 work to do in that direction.  
14 Q Okay. So he had some ideas.  
15 A Yeah, some --  
16 Q And did he complete those ideas?  
17 A Not -- not for the glyphosate.  
18 Q Okay. And Dr. Parry was not a Monsanto  
19 employee, correct?  
20 A That's correct.  
21 Q He was never employed by Monsanto,  
22 correct?  
23 A Never.  
24 Q So he's an independent scientist from  
25 Monsanto, correct?  
00127:01 A Yes.  
02 Q Okay. And did Dr. Parry ever ask for  
03 financial support from Monsanto to complete the  
04 studies that he had recommended?  
05 A Not that I recall.

**159. PAGE 127:11 TO 127:14 (RUNNING 00:00:13.817)**

11 Q Okay. If Dr. Parry had suggested and  
12 requested samples to complete the studies that he had  
13 suggested, do you agree Monsanto should have provided  
14 those samples?

**160. PAGE 127:19 TO 128:21 (RUNNING 00:01:16.874)**

19 THE WITNESS: We were reluctant to place  
20 studies in the laboratory of Dr. Parry for a variety  
21 of reasons. In the first place, since the results of  
22 the studies would be used for regulatory reasons, we  
23 would have preferred to have those studies carried  
24 out in a laboratory which is accredited for good  
25 laboratory practices, and his department was not.

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00128:01 Plus that if he would engage and we  
02 engaged on supplementary -- additional testing to  
03 prove whether or not there was oxidative stress, we  
04 were looking into much more parameters than just  
05 genotoxic parameters, like, you know, organ weights,  
06 like gross pathology, like histopathology, and his  
07 department was not equipped to do these type of  
08 assays.  
09 And that is more or less -- that's why we  
10 were reluctant to place those studies in his  
11 laboratory, but we were very open to listen to him  
12 and to follow suggestions.  
13 BY MS. WAGSTAFF:  
14 Q Okay. So you were reluctant to give  
15 the -- to let Dr. Parry do the studies. Is that --  
16 A Yes.  
17 Q -- a good summary of what you just said?  
18 A That's a good summary, yes.  
19 Q Okay. So who did the studies?  
20 A The studies -- you know, finally, we  
21 started to do the studies.

**161. PAGE 128:22 TO 129:03 (RUNNING 00:00:16.033)**

22 Q Uh-huh.  
23 A I had contacts with Professor Parry to  
24 give suggestions and do some exchange in the design  
25 of the studies. But the studies finally have been  
00129:01 carried out at the Environmental Health Laboratory of  
02 Monsanto in St. Louis, which is a GLP-accredited  
03 laboratory.

**162. PAGE 129:04 TO 129:07 (RUNNING 00:00:12.978)**

04 Q Okay. So of all of the -- the scientists  
05 in the world, these studies ended up being done in  
06 St. Louis by Monsanto scientists, correct?  
07 A Yes.

**163. PAGE 129:08 TO 129:20 (RUNNING 00:00:37.510)**

08 Q Okay. And what -- were the studies  
09 published?  
10 A The studies -- as soon as the study  
11 results were available, we first shared the study  
12 results with Professor Parry. We went actually to  
13 visit him and give a whole presentation of the study  
14 results, and discuss all the ins and outs of the  
15 study results. And -- and we can talk later of what  
16 his opinion was on the study results.  
17 But the study results had been in the  
18 first place presented in the open as opposed to on  
19 the Society of Toxicology meeting in San Francisco in  
20 2001.

**164. PAGE 129:21 TO 130:10 (RUNNING 00:00:41.061)**

21 Q Okay. And who at Monsanto did those  
22 studies?  
23 A These studies were conducted by a couple  
24 of scientists in the Environmental Health Laboratory  
25 under the leadership of Dr. Larry Kier and Kathy  
00130:01 Holz, and, you know, Alan Wilson, and I myself had  
02 also a big say in the design and conduct of the  
03 studies.  
04 Q Okay. And you said that that study  
05 was -- when -- when did that study occur?  
06 A That must have been -- well, I don't

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07 recall exactly, but it was in 2000s that these  
08 studies must have been conducted.  
09 Q And you left in 2003, right?  
10 A Yes.

165. PAGE 130:11 TO 132:04 (RUNNING 00:02:02.573)

11 Q Okay. So you're -- you're saying that  
12 the studies that Dr. Parry conducted -- or suggested  
13 were conducted by Monsanto at Monsanto's headquarters  
14 between 2000 -- well, here we are in -- we were in  
15 September of two -- or in April of 2000, and they  
16 haven't been done, so they were conducted probably  
17 in -- you're saying 2000 or 2001?  
18 A They were conducted somewhere in the  
19 second half of 2000. The results were ready -- were  
20 ready very early 2001.  
21 Q Okay. And what journals were the results  
22 published in?  
23 A The results were not published in a  
24 journal. They were published as the proceedings in  
25 the Society of Toxicology as a -- it was a poster  
00131:01 presentation at the Society of Toxicology, official  
02 journal, you know, for the -- as an abstract for the  
03 proceedings of the SOT meeting in San Francisco in  
04 2001.  
05 Q Okay. So what was the -- who presented  
06 the poster?  
07 A I was at that meeting -- well, there were  
08 several of the authors. Well, the way how the poster  
09 is presented, there's actually posters posted, then,  
10 you know, there's some -- always scientists go to the  
11 poster -- actually, you know, is present at the  
12 poster to respond to questions that people may have  
13 on the poster. So I was part of them, but also I  
14 believe also Bill Heydens, et cetera, several others,  
15 yeah.  
16 Q So this was not -- these results were not  
17 peer reviewed, correct?  
18 A These results were peer reviewed in the  
19 process -- it's not a peer reviewed for publication,  
20 but they were peer reviewed in the process of the  
21 submission of abstracts to the Society of Toxicology  
22 of the United States.  
23 Q Okay. So was this -- were these results  
24 submitted to a journal?  
25 A These results were later submitted to a  
00132:01 journal and published.  
02 Q So these results were -- have been  
03 published?  
04 A Yes.

166. PAGE 132:11 TO 132:21 (RUNNING 00:00:40.378)

11 Q Okay. And where was it published?  
12 A What do you mean, what journal?  
13 Q Mm-hmm.  
14 A Let's see. There's the Journal of  
15 Agricultural Chemicals, et cetera. I don't recall  
16 exactly, but they've been published in 2008.  
17 Q So are you talking about the paper by  
18 Heydens, Healy, Hotz, Kier, you, Wilson and Donna  
19 Farmer called "Genotoxic potential of glyphosate  
20 formulations: Mode-of-action investigations"?  
21 A Yes.

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167. PAGE 132:25 TO 133:04 (RUNNING 00:00:16.142)

25 for sakeness of a complete record, is this the -- is  
00133:01 this the study that Monsanto conducted in response to  
02 Dr. Parry's questions and --  
03 A Yes.  
04 Q -- suggestions?

168. PAGE 133:06 TO 133:07 (RUNNING 00:00:03.615)

06 Q Okay. And so let's mark that as  
07 Exhibit 10.

169. PAGE 133:13 TO 134:03 (RUNNING 00:00:45.901)

13 But it's your belief and testimony that  
14 all of Dr. Parry's questions were answered by that  
15 study?  
16 A Let me put it this way: That Dr. Parry  
17 had a whole list of recommendations.  
18 Q Mm-hmm.  
19 A And what happened is actually one of the  
20 most important recommendations, and he repeated that  
21 all the time is, could you repeat the study of  
22 Bolognesi, as -- you know, as best as possible, and  
23 produce a couple of endpoints, which he addressed  
24 like, for example, oxidative stress or oxidative DNA  
25 damage.  
00134:01 And then we started to do the study and  
02 the plan was actually to present the study results to  
03 Dr. Parry and then to see what can happen next.

170. PAGE 134:15 TO 134:17 (RUNNING 00:00:08.114)

15 Q Okay. So if we want to look to the  
16 answers for all of Dr. Parry's questions, we can find  
17 them all in that report; is that correct?

171. PAGE 134:20 TO 135:05 (RUNNING 00:00:26.420)

20 THE WITNESS: The -- Dr. Parry had a  
21 whole list of recommendations, right.  
22 BY MS. WAGSTAFF:  
23 Q Correct.  
24 A And the whole list, the most important --  
25 we took the most important type of, you know,  
00135:01 questions. These were recommendations in regard  
02 to -- to repeat the results -- to confirm the results  
03 that had been found by Peluso and by Bolognesi, and  
04 actually address a couple of questions in terms of  
05 oxidative damage.

172. PAGE 135:16 TO 136:14 (RUNNING 00:01:08.609)

 0220-032 -



16 Q We're going back to Exhibit 8 really  
17 quick, and I just want to talk about -- in this  
18 Exhibit 8, we went through these in detail --  
19 A Mm-hmm.  
20 Q -- Dr. Parry listed eight questions.  
21 Correct?  
22 A Yes.  
23 Q And is it your testimony that the answers  
24 to each of these questions can be found within your  
25 2008 article that is entitled "Genotox potential of  
00136:01 glyphosate formulations: Mode-of-action  
02 investigations"?

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03 A Mm-hmm.  
04 Q Okay.  
05 A Just to make clear, we produced a lot of  
06 new toxicological evidence, and then the plan was to

 -KE0220-032 - Clear Attached Exhibit 0220-032



07 go to Dr. Parry and see whether, you know, all of his  
08 questions still were -- he was satisfied or not. And  
09 it was the -- the subject, the topic of the meeting  
10 we organized together, we talked to Dr. Parry and to  
11 listen to him whether he was satisfied with all the  
12 results or whether he would have, you know, other or  
13 new recommendations or some of the recommendations  
14 that were in here.

173. PAGE 140:02 TO 140:04 (RUNNING 00:00:06.581)

02 And so this was considered an honor to be  
03 a Monsanto fellow.  
04 A Yes.

174. PAGE 141:19 TO 142:05 (RUNNING 00:00:34.209)

19 Q Okay. So if you look at this letter,  
20 it -- I hope talking about your strengths doesn't  
21 embarrass you because that's all this letter talks  
22 about, but it talks about how -- this letter is about  
23 you, correct?  
24 A Yes.  
25 Q Okay. So it gives you great pleasure to  
00142:01 nominate Dr. Mark Martens -- that's you -- for the  
02 appointment of the position of Monsanto fellow.  
03 That's what we've been talking about, correct?  
04 You've been with Monsanto at that time  
05 for 12 years.

175. PAGE 142:09 TO 143:04 (RUNNING 00:00:57.654)

09 Q Okay. And during that time you have  
10 developed and sustained technical expertise in  
11 various areas of toxicology, most notably metabolism,  
12 genotoxicity and carcinogenicity.  
13 And those two at the end are the ones  
14 that we've been talking about most today, right?  
15 A Yes.  
16 Q So they're recognizing you for being an  
17 expert in this area.  
18 It says that you have established  
19 yourself as a highly knowledgeable and credible  
20 scientist outside of Monsanto as well.  
21 I assume you don't disagree with that.  
22 A I don't disagree.  
23 Q It says that you had internal leadership  
24 and external influence that makes you valuable and  
25 effective to support Monsanto's entire profile of  
00143:01 products in Europe -- in the Europe/Africa region.  
02 And that would include the Roundup and  
03 glyphosate products, right?  
04 A Yes.

176. PAGE 145:21 TO 147:10 (RUNNING 00:01:59.246)

21 Let's talk more about what -- what  
22 Dr. Hjelle says about you.  
23 You have -- you were instrumental in  
24 convincing a key European expert that reports of  
25 genotoxicity with Roundup actually represent effects

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00146:01 secondary to cytotoxicity, rather than a primary  
02 genotoxic response.  
03 And that was Dr. Parry, right?  
04 A Yes.  
05 Q That's what we've been talking about all  
06 morning.  
07 It says that you were also influential or  
08 effective in reversing the strong negative regulatory  
09 position toward MON 13900 in France.  
10 What's -- what's MON 13900?  
11 A I think it was a grow regulating  
12 compound, but I honestly don't recall the detail of  
13 that.  
14 Q Okay. And then it says that you have  
15 been successful in alleviating concerns over  
16 genotoxicity and carcinogenicity, and that's really  
17 what your role was with -- with engaging in Parry,  
18 right?  
19 A My role in engaging with Parry was to  
20 find -- to receive a second opinion and to get  
21 Professor Parry to further elucidate, you know, the  
22 real significance of those findings by doing  
23 supplementary additional testing.  
24 Q Okay. And -- and Dr. Parry's report did  
25 not alleviate the concerns over genotoxicity or  
00147:01 carcinogen -- carcinogenicity, right?  
02 A Well, what happens is that on the basis  
03 of the recommendations of Dr. Parry, we initiated a  
04 stepwise research program, and shared those data with  
05 Dr. Parry and discussed those results with Dr. Parry  
06 so that he could reassess his position on the basis  
07 of those new data.  
08 Q Okay. But his reports on their face  
09 didn't alleviate the concerns over the genotoxicity,  
10 right?

177. PAGE 147:14 TO 149:07 (RUNNING 00:02:17.155)

14 A All of them. The -- the reports that we  
15 have been talking about from Dr. Parry were actually  
16 an evaluation on -- of the -- the papers of -- you  
17 know, that we discussed in the beginning, plus the  
18 regulatory genotoxicology work.  
19 Q Okay. So my questions were -- my  
20 question was, Dr. Parry's report did not alleviate  
21 the concerns over -- over the genotoxicity and  
22 carcinogenicity, correct?  
23 A Dr. Parry's report actually expressed a  
24 concern with recommendations that we used to produce  
25 new toxicological data in concert with Dr. Parry,  
00148:01 that we then shared with Dr. Parry to come to a new  
02 conclusion on the basis of those data.  
03 Q Okay. And did -- did you share -- did  
04 you share Dr. Parry's reports, either of them,  
05 report 1 or report 2, with anybody?  
06 A No, because it was a consultancy with  
07 Dr. Parry, which actually -- with the intention to  
08 lead us to the production of new data which would  
09 help us to gain insight in the type of data that were  
10 produced by Bolognesi and Peluso.  
11 Q Okay. And you've agreed earlier that  
12 the questions raised by Dr. Parry were good  
13 questions.  
14 A Yes, mm-hmm.  
15 Q Okay. And they would -- why not share  
16 those with other scientists around the world?  
17 A No, because this was a preliminary --

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18 preliminary evaluation which led to an hypothetical --  
19 hypothetical evaluation of assessment of Roundup and  
20 glyphosate by Dr. Parry, and we needed actually to  
21 first confirm whether or not his hypothesis was  
22 value -- was valid.

23 Q Okay. So let me just make sure I  
24 understand what happened. Okay?

25 A Mm-hmm.  
00149:01 Q You engaged -- Monsanto engages Dr. Parry  
02 to assess some studies that have occurred, correct?

03 A Right.

04 Q Okay. And those studies raised some  
05 valid concerns about the safety profile of glyphosate  
06 and Roundup, right?

07 A Yes.

**178. PAGE 149:18 TO 150:09 (RUNNING 00:00:29.851)**

18 Q So you asked him an opinion and he writes  
19 a report, and the report is not well received by  
20 Monsanto toxicologists.

21 A Well, the conclusions were well received.

22 Q Okay.

23 A The form of the report was not well  
24 received.

25 Q Okay. The conclusions were well  
00150:01 received --

02 A Mm-hmm.

03 Q -- and eventually Dr. Parry is given more  
04 information.

05 A Yes.

06 Q And he writes another report with very  
07 similar conclusions. We've walked through each of  
08 the reports, correct?

09 A Mm-hmm.

**179. PAGE 150:21 TO 151:15 (RUNNING 00:00:56.752)**

21 Q Yeah. But it's your opinion that these  
22 questions should not be shared with anyone else.

23 A It was the intention to use those  
24 questions and to use the recommendation to initiate  
25 further research to address them in a corrective way  
00151:01 and to see where exactly that we -- both parties  
02 could understand what's actually going on, and  
03 whether we have an initiation of oxidative damage and  
04 whether possible genotoxicity was secondary to the  
05 initiation of oxidative damage.

06 Q Okay. And I assume by the same token,  
07 you never shared -- Monsanto never shared the Parry  
08 reports with any regulatory agency.

09 A That was not -- that was internal, you  
10 know, expert to our company, you know, information,  
11 and exchange of views, which had as the only  
12 objective to inspire Monsanto to do some  
13 supplementary research and to better understand the  
14 effects that have been published by Peluso and  
15 Bolognesi.

**180. PAGE 151:20 TO 151:22 (RUNNING 00:00:05.451)**

20 token that Monsanto never shared the Parry report  
21 with any regulatory agencies, correct?

22 A That's correct.

**181. PAGE 152:01 TO 152:02 (RUNNING 00:00:02.377)**

00152:01 Q Is that correct?

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02 A That's correct, yeah.

182. PAGE 152:08 TO 152:18 (RUNNING 00:00:28.414)

08 Q Okay. And in fact, Monsanto engaged  
09 Dr. Parry in a secrecy agreement, right?  
10 A In a confidentiality agreement.  
11 Q Well, the words that you used were

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12 secrecy agreement, correct?  
13 A Sometimes these words are used on the  
14 document itself. In fact, it's a confidentiality  
15 agreement.  
16 Q Okay. It's -- it's -- but it was a  
17 secrecy agreement making Dr. Parry contractually  
18 agree not to share the results with anyone, correct?

183. PAGE 152:20 TO 152:24 (RUNNING 00:00:17.101)

20 THE WITNESS: Let me rephrase. A  
21 confidentiality agreement is signed between an  
22 external expert and a company in the case that a  
23 company have -- is willing to share confidential data  
24 with the expert, and that is general practice.

184. PAGE 153:04 TO 153:14 (RUNNING 00:00:24.360)

 -KE0218 - Clear Attached Exhibit 0218

04 Q What is the -- Monsanto gave to Dr. Parry  
05 four articles that were in the public domain,  
06 correct?  
07 A That -- that is not the issue of a  
08 confidentiality agreement. Monsanto provided to  
09 Dr. Parry --  
10 Q Mm-hmm.  
11 A -- all its proprietary rights studies,  
12 the regulatory studies, which are the property of  
13 Monsanto, and it was within that context that the  
14 confidentiality agreement was needed.

185. PAGE 154:04 TO 154:16 (RUNNING 00:00:15.586)

04 THE WITNESS: The -- when -- you know,  
05 I'm a consultant myself.  
06 BY MS. WAGSTAFF:  
07 Q Mm-hmm.  
08 A If I'm asked by a company to provide  
09 advice --  
10 Q Mm-hmm.  
11 A -- on documents which are the property of  
12 that company --  
13 Q Mm-hmm.  
14 A -- then always a confidentiality  
15 agreement is signed, and this was exactly the same  
16 situation.

186. PAGE 154:20 TO 154:22 (RUNNING 00:00:04.672)

20 Q Okay. And you said you received from  
21 Professor Parry a signed secrecy agreement, right?  
22 A Right.

187. PAGE 155:08 TO 155:24 (RUNNING 00:00:35.173)

08 Q Okay. So was it your understanding then  
09 that Dr. Parry could share his analysis and report

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10 with other people?  
11 A Yes.  
12 Q Okay. So it's -- you don't believe that  
13 that analysis or report is contained within the  
14 secrecy agreement.  
15 A That was not why a secrecy agreement is  
16 normally signed for.  
17 Q Okay. And do you think that that report  
18 should be kept secret?  
19 A It's an evaluation.  
20 Q Mm-hmm.  
21 A That wasn't an open question. That was  
22 never in question. We asked him for an advice, he  
23 provided the advice, and then we worked on that  
24 advice.

**188. PAGE 156:23 TO 156:25 (RUNNING 00:00:08.543)**

23 I'm asking you why would the results  
24 or -- and/or his analysis need to be subject to a  
25 secrecy agreement?

**189. PAGE 157:04 TO 157:08 (RUNNING 00:00:16.431)**

04 THE WITNESS: Yep. A secrecy or a  
05 confidentiality agreement is always signed when an  
06 external expert works together with a company, and  
07 that company provides the external expert with data  
08 which are confidential and have proprietary rights.

**190. PAGE 157:12 TO 157:25 (RUNNING 00:00:23.784)**

12 I believe I understand your testimony to  
13 be that he signed a secrecy agreement because  
14 Monsanto gave him secret documents.  
15 A No secret documents. Confidential  
16 documents.  
17 Q Okay. So he signed a secrecy agreement  
18 because Monsanto gave him confidential documents,  
19 correct?  
20 A That is correct.  
21 Q And from those confidential documents,  
22 he -- Dr. Parry created a report.  
23 A Mm-hmm.  
24 Q Or an analysis, an evaluation.  
25 A Yes.

**191. PAGE 158:20 TO 159:02 (RUNNING 00:00:22.109)**

20 Q Right. And what I'm asking is why -- why  
21 weren't his results shared more broadly?  
22 A Well, because we were awaiting the  
23 results that we would be producing in order to  
24 respond to his recommendations and his concerns.  
25 Q Okay. So I am understanding it correctly  
00159:01 that no one at Monsanto shared the Parry papers with  
02 anyone?

**192. PAGE 159:09 TO 160:10 (RUNNING 00:01:13.997)**

09 A Well, you know, as far as the whole  
10 research project was not terminated, there was no  
11 reason to start sharing those evaluations and data  
12 with other party.  
13 Q Okay. So the answer is, no, it was  
14 not -- the information was not shared outside of  
15 Monsanto?  
16 A No, it was not shared outside of  
17 Monsanto.

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18 Q What is the Glyphosate Task Force?  
19 A The Glyphosate Task Force is -- is a  
20 European task force, and I presume there is a similar  
21 type of task force in the United States, that more or  
22 less -- well, it assembles all the glyphosate, all  
23 the companies that bring glyphosate to the market in  
24 Europe, and a part of the European Crop Protection  
25 Association.

00160:01 Q Okay. And is -- does it have members?  
02 A Yes.

03 Q Okay. And is Monsanto a member of the  
04 Glyphosate Task Force?

05 A Yes.

06 Q Okay. Is it a company or a corporation?

07 A It is a working group that resides under  
08 the European Crop Protection Association, which is a  
09 European association of crop protection products  
10 produced.

### 193. PAGE 160:22 TO 161:06 (RUNNING 00:00:20.110)

22 Q Okay. Have you done work with the  
23 Glyphosate Task Force recently?

24 A Yes.

25 Q In what capacity?

00161:01 A I represented the Glyphosate Task Force  
02 at the meetings of the European Union, at the  
03 European Chemicals Agency for the classification of  
04 glyphosate.

05 Q Okay. And this was recently, correct?

06 A Yes.

### 194. PAGE 161:14 TO 161:21 (RUNNING 00:00:16.961)

14 Did you get paid for your work with the  
15 Glyphosate Task Force that you just mentioned  
16 recently?

17 A As a consultant, yes.

18 Q Okay. And does the task force itself pay  
19 you for that work?

20 A Ultimately the task force pays me for the  
21 services provided.

### 195. PAGE 162:10 TO 162:24 (RUNNING 00:00:41.584)

10 Q Okay. And what's that consulting work  
11 that you're doing for Monsanto with respect to  
12 glyphosate within the last year and a half or --

13 A That was all in relation to the European  
14 classification and resubmission of glyphosate in  
15 Europe.

16 Q Okay. So you were a consultant for the  
17 Glyphosate Task Force and also for Monsanto.

18 A Well, you know, I was -- within the  
19 contract that I had with Monsanto, I got sanctioned  
20 as a representative of Glyphosate Task Force.

21 Q Okay. So it was Monsanto who paid you  
22 for that work on the Glyphosate Task Force.

23 A And back charged to the Glyphosate Task  
24 Force.

### 196. PAGE 163:21 TO 163:22 (RUNNING 00:00:05.699)

21 Q So how much money do you believe that you  
22 were paid for that consultancy work?

### 197. PAGE 164:01 TO 164:10 (RUNNING 00:00:12.701)

00164:01 A Oh, it must have been something like

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02 60,000 Euros.  
03 Q 60,000 Euros --  
04 A Yes.  
05 Q -- is that what you said? Okay.  
06 And that was over a period of -- you said  
07 since last summer, and right now it's --  
08 A Eight months, something like --  
09 Q Eight months. Okay.  
10 A Eight or nine months.

**198. PAGE 164:15 TO 164:20 (RUNNING 00:00:15.812)**

15 And does your consultancy agreement state  
16 that you cannot work for Monsanto competitors?  
17 A No.  
18 Q No. There's no clause that says you can  
19 only consult for Monsanto?  
20 A There is no exclusivity clause.

**199. PAGE 165:11 TO 166:07 (RUNNING 00:01:20.301)**

11 Q Okay. We have talked throughout the day  
12 about reports that Dr. Parry has written, correct?  
13 A Yes.  
14 Q And each of those reports had certain  
15 analyses or -- or evaluations or conclusions  
16 contained within them, correct?  
17 A Yes.  
18 Q Did Dr. Parry ever write to you a  
19 retraction of those conclusions, evaluations or  
20 analyses?  
21 A I don't recall that.  
22 Q Did Dr. Parry ever write a version of a  
23 report where his evaluations or conclusions were  
24 inconsistent with the ones -- the evaluations and  
25 conclusions we looked at today?  
00166:01 A I don't recall such a report.  
02 Q Okay. So -- okay. Did -- did you ever  
03 receive any written confirmation from Dr. Parry that  
04 Monsanto has satisfied the questions that he posed  
05 that we went over today?  
06 A That was written in a meeting report that  
07 was sent out by Richard Garnett.

**200. PAGE 166:16 TO 166:18 (RUNNING 00:00:07.547)**

16 So I'm wondering is there any written  
17 confirmation from Dr. Parry that his questions have  
18 been answered in any way?

**201. PAGE 166:23 TO 167:14 (RUNNING 00:00:36.674)**

23 THE WITNESS: The conclusions that were  
24 written down by -- the conclusions of the meeting  
25 that were written down by Richard Garnett or the  
00167:01 conclusions that were reached together with Dr. Parry  
02 in his meeting were genuinely reflecting the  
03 conclusions that we all together reached at that  
04 meeting.  
05 BY MS. WAGSTAFF:  
06 Q Okay. So my question was, did you ever  
07 receive written confirmation from Dr. Parry that his  
08 questions had been answered, and it sounds like, no,  
09 you didn't.  
10 A No, we didn't, but I had a continued  
11 relationship with Dr. Parry afterwards as well.  
12 Q Sure. But you never received written  
13 confirmation from him, correct?

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14 A Not that I recall.

202. PAGE 169:15 TO 169:16 (RUNNING 00:00:04.880)

15 MS. WAGSTAFF: Yeah, and this is what

0209 -

16 we're going to label Exhibit 12 and --

203. PAGE 171:20 TO 171:23 (RUNNING 00:00:10.798)

20 Q So this appears to be a PowerPoint that  
21 you've created. Do you remember this PowerPoint?

22 A I -- I recall the images when I see them  
23 now, yes.

204. PAGE 172:05 TO 174:06 (RUNNING 00:02:08.909)

05 Q So do you remember making this  
06 PowerPoint?

07 A Yes, yes. I remember the -- some of the  
08 pictures, yes.

09 Q All right. And so when you made this,  
10 you were not an employee of Monsanto, correct?

11 A I was an employ -- employee of Monsanto  
12 at the time when I made this presentation.

13 Q Oh, you were. Okay.

14 A Yeah.

15 Q So you made this presentation before  
16 2003?

17 A Yes.

18 Q Okay. And -- and what did you make this  
19 presentation for?

20 A That presentation was given at the  
21 occasion of an internal technology meeting of  
22 Monsanto Europe.

23 Q Okay. And so just help me understand,  
24 who was the audience that you were presenting to?

25 A It was all European Monsanto technology  
00173:01 researchers.

02 Q Okay. And do you remember why you gave  
03 this presentation?

04 A This presentation -- well, Monsanto  
05 Europe organizes on a regular basis scientific  
06 meetings to educate their personnel and to put them  
07 aware of new findings in -- in science that is of  
08 application to the agricultural products of Monsanto.  
09 And at the tech days 2001, which were organized in  
10 Brussels, the theme was surfactants.

11 Q Okay. At the what days? I just didn't  
12 hear what you said.

13 A Well, there was internal technology  
14 meeting days were called the tech days.

15 Q Oh, tech days. Okay. Got it.

16 So tech days 2001 was in Brussels --  
17 Yes.

18 Q -- and the theme was surfactants.

19 A Yes.

20 Q And this was your presentation at that.

21 A Right.

22 Q You remember that?

23 A Right.

24 Q Okay. And so you put this data together  
25 at that point, right?

00174:01 A Right.

02 Q Okay. And this isn't a PowerPoint  
03 someone else made and gave to you, correct?



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04 A No, no, this is my PowerPoint.  
05 Q You made it, this is your thoughts?  
06 A Yes.

**205. PAGE 174:10 TO 174:25 (RUNNING 00:00:52.679)**

10 Q Okay. So, unfortunately, there aren't  
11 names -- or page numbers on it, but I will kind of  
12 guide you by picture. Okay?  
13 A Okay.  
14 Q Okay. If you go to the thing that says

 0209-015 -



15 "Surfactant Technology, Specific Toxicity Cases."  
16 It's kind of far back, and then it will be easy from  
17 there. It looks like this (indicating).  
18 A Yes.  
19 Q Okay.  
20 A I have it.  
21 Q And these are all slides from your  
22 PowerPoint, right?  
23 So it looks like you were educating your  
24 audience about the toxicology of surfactants, right?  
25 A Yes.

**206. PAGE 175:03 TO 175:13 (RUNNING 00:00:31.127)**

03 In doing so, you noted the Peluso case,  
04 right?  
05 A Yes. One -- well, the results of our  
06 additional research were available at that time, and  
07 one of the initiatives was actually to inform  
08 personnel -- technology personnel in Monsanto about  
09 the results.  
10 Q Mm-hmm.  
11 A And also at the same time in parallel, we  
12 were preparing the poster for the Society of  
13 Toxicology meeting in San Francisco.

**207. PAGE 175:18 TO 177:11 (RUNNING 00:01:50.709)**

18 Q My question was, in educating these  
19 folks, you noted the Peluso case, right?  
20 A Yes.  
21 Q Okay. And you talk about the Peluso case  
22 and you talk about MON 35050, which is what we've  
23 been talking about all morning, the Italian  
24 formulation, right?  
25 A Yes.  
00176:01 Q And that's the -- MON 35050 is also the  
02 formulation used in the Peluso and the -- the --  
03 A Bolognesi.  
04 Q -- Bolognesi paper.  
05 A Yes.  
06 Q Right?  
07 A Yes.  
08 Q Okay. And it says: "The in vivo  
09 genotoxicity finding was cause of concern to  
10 regulatory authorities."  
11 Correct?  
12 A Yes.  
13 Q Okay. So now these are your thoughts  
14 that the genotoxicity finding in vivo was of concern,  
15 correct?  
16 A Yes.

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17 Q Okay. And this is -- then you're --  
18 you're going on to educate these people who are  
19 listening to your presentation about the toxicity of  
20 surfactants, and you said: "To better understand the  
21 significance, Monsanto undertook research to examine  
22 the role of intraperitoneal versus oral, DMSO olive  
23 oil versus saline, and then the Italian formulation  
24 with and without glyphosate." Right?  
25 A Yes, exactly.  
00177:01 Q So I just want to make sure that I  
02 understand what additional research Monsanto  
03 undertook. Was that the 2008 article that we've been  
04 talking about?  
05 A Yes.  
06 Q And was there any other research Monsanto  
07 undertook?  
08 A No. That was that research.  
09 Q Okay. And do you remember about what  
10 month this presentation occurred in 2001?  
11 A That must have been very early 2001.

208. PAGE 177:22 TO 178:03 (RUNNING 00:00:14.417)

22 Q Okay. And so your -- the -- the results  
23 from your new study weren't finalized at this point;  
24 is that correct?  
25 A I think they were known by that time,  
00178:01 yes.  
02 Q Okay. So do you include them in this  
03 PowerPoint?

209. PAGE 178:05 TO 178:06 (RUNNING 00:00:03.888)

05 Yeah, the conclusions of that study were  
06 mentioned on a slide.

210. PAGE 178:14 TO 179:02 (RUNNING 00:00:36.698)

14 Q Okay. So this is -- these are your  
15 conclusions --  
16 A Mm-hmm.  
17 Q -- from the MON 35050 case.

0207 -



18 So the MON 350 case is your 2008 study,  
19 correct?  
20 A Yes.  
21 Q Okay. And just so we're clear, this is  
22 the -- this is the 2008 study that Bill Heydens is  
23 the lead coauthor, right?  
24 A Mm-hmm.  
25 Q And it's called "Genotoxic Potential of  
00179:01 Glyphosate Formulations: Mode-of-Action  
02 Investigations," correct?

211. PAGE 179:10 TO 179:21 (RUNNING 00:00:38.183)

10 Q If this was done in 2001, previous to --  
11 to this research, why did it take seven years to  
12 publish it in a journal?  
13 A Well, we were very fast in actually  
14 bringing it into the open because we communicated the  
15 results via a poster on the -- at the Society of  
16 Toxicology meeting in San Francisco. So those

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17 results were in the open and were actually shared  
18 with the outside world for discussion.  
19 To turn all those results into a  
20 publication, that calls for a lot of work, and while  
21 that has been done after I left Monsanto in 2003.

**212. PAGE 180:07 TO 180:09 (RUNNING 00:00:13.547)**

 -KE0207 - Clear Attached Exhibit 0207



07 Q Okay. So when you left Monsanto in 2003,  
08 the results of this MON 35050 case study were not  
09 published, correct?

**213. PAGE 180:16 TO 180:21 (RUNNING 00:00:16.119)**

16 A They were already put into the open via  
17 our poster presentation.  
18 Q Okay. And so this MON 35050 case study,  
19 when you left Monsanto in 2013 was not in --  
20 published in a journal, correct?  
21 A That is correct, yes.

**214. PAGE 183:19 TO 183:25 (RUNNING 00:00:20.287)**

19 Q Well, I will ask one question about your  
20 study, that is the 2008 study. Was that a risk  
21 assessment?  
22 A It was meant to be a mechanistic study,  
23 if I may say so.  
24 Q So is that a risk assessment?  
25 A No.

**215. PAGE 187:24 TO 189:09 (RUNNING 00:01:17.557)**

24 You are a toxicologist, correct, sir?  
25 A Yes, sir.  
00188:01 Q Would you please tell the jury what a  
02 toxicologist is.  
03 A A toxicologist is a scientist who studies  
04 the effects of chemical substances on the health of  
05 animals and men.  
06 Q And you have a Ph.D. in toxicology?  
07 A Yes.  
08 Q Did you start your career as what is  
09 called a forensic toxicologist?  
10 A Yes, I did.  
11 Q Would you please explain to the jury what  
12 a forensic toxicologist is.  
13 A A forensic toxicologist is a scientist  
14 who actually, you know, designs and applies methods  
15 of analysis to determine the concentration of toxic  
16 substances in body fluids and tissues of people and  
17 of victims in order to establish a causal  
18 relationship between a crime and, for example, the --  
19 the death of the victim.  
20 Q Okay. And that was a little bit of a  
21 technical explanation.  
22 You're one of the scientists that works  
23 for police departments or detectives --  
24 A Yes.  
25 Q -- to investigate poisons and other --  
00189:01 A Right.  
02 Q -- substances that might have hurt  
03 someone in a crime?  
04 A Yes.  
05 Q Is that a -- is that a good explanation?

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06 A That is a good explanation, yes.  
07 Q Did you do a residency with Scotland Yard  
08 in England?  
09 A Yes, I did.

216. PAGE 189:10 TO 191:04 (RUNNING 00:02:00.658)

10 Q And tell us in a sentence or two what you  
11 did there.  
12 A During my residency at Scotland Yard,  
13 which is the Metropolitan Police Laboratories in  
14 London, I spent time in acquiring knowledge and  
15 refining my knowledge in terms of the analysis of  
16 toxic substances in body fluids and tissues.  
17 Q After your forensic toxicology work as a  
18 student and as a resident at Scotland Yard, what did  
19 you go on to do next in your career?  
20 A After my Ph.D., I joined the  
21 pharmaceutical industry.  
22 Q Well, what company did you join?  
23 A Continental Pharma in Brussels.  
24 Q And what was your job duty with  
25 Continental Pharmaceuticals in Brussels?  
00190:01 A I was the head of the department of mass  
02 spectrometry, pharmacokinetics and metabolism.  
03 Q You said "pharmacokinetics." What is  
04 pharmacokinetics?  
05 A Pharmacokinetics is the study of the  
06 behavior of chemical substances in the human body.  
07 Q How the chemicals move through the body?  
08 A And how they are excreted from the body  
09 as well.  
10 Q And you said "metabolism." What is that?  
11 A The metabolism is a series of chemical  
12 reactions that take place in the liver and which lead  
13 to breakdown products, which are -- can be either  
14 toxic, nontoxic, and which are excreted through the  
15 kidneys from the body.  
16 Q You also mentioned mass spectrometry, and  
17 that's a tool that's used to assess chemicals, right?  
18 A That's a tool that is used to identify  
19 and characterize and quantify chemicals that, you  
20 know, are present in body fluids and tissues.  
21 Q What did you do after your work at  
22 Continental Pharma?  
23 A After Continental Pharma, I joined the  
24 Belgium authorities as a specialist in clinical  
25 biochemistry first, as an inspector, and then  
00191:01 afterwards I joined the toxicologists, where I became  
02 head of the toxicology department, and actually  
03 founded the toxicology department at the National  
04 Institutes of Health.

217. PAGE 191:05 TO 192:11 (RUNNING 00:01:20.009)

05 Q And when you say the "Belgian  
06 authorities," that's the same as the National  
07 Institutes of Health?  
08 A Well, Belgium is a small country, so we  
09 don't have a separate institute like National  
10 Institutes of Health, but I worked -- at the time it  
11 was called the Institute of Hygiene and Epidemiology,  
12 which was actually the scientific research institute  
13 of the Ministry of Health.  
14 Q Now, sir, as you said, in the United  
15 States we have a whole agency called the National  
16 Institutes of Health that does scientific research,

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17 and we also have the Environmental Protection Agency  
18 which regulates pesticides.  
19 In Belgium, does the same organization do  
20 both of those things?  
21 A In Belgium, it's a collaboration between  
22 the Ministry and the Scientific Institute for Public  
23 Health.  
24 Q And that's where you worked, right?  
25 A Yes.  
00192:01 Q How long were you a regulator in Belgium?  
02 A Ten years.  
03 Q And what -- what was your role there?  
04 What did you do at the institute?  
05 A I was the head of the department of  
06 toxicology, and in that function I was the primary  
07 advisor of the Minister of Health of Belgium. And at  
08 the same time I had to represent my country at the  
09 meetings of the European Union, the commission of the  
10 European Union, at OECD, and at other international  
11 meetings like, for example, IPCS.

218. PAGE 192:12 TO 193:05 (RUNNING 00:00:43.717)

12 Q Were you involved in inspections of  
13 companies and approval of their products?  
14 A That was also --  
15 Q Or disapproval of their products?  
16 A Yes, that was indeed the case.  
17 Q After your work as a regulator in Belgium  
18 for 10 years, what did you do next?  
19 A I joined Monsanto in Brussels.  
20 Q What were your responsibilities at  
21 Monsanto, broadly speaking?  
22 A At the time when I joined Monsanto,  
23 Monsanto had a very large chemical division next to  
24 the agrochemical division and the food division, and  
25 I was responsible for the whole portfolio of Monsanto  
00193:01 products for all these sectors in Europe and Africa.  
02 Q And it was a Europe -- it was a regional  
03 responsibility for Europe, Africa and the Middle  
04 East?  
05 A Yes.

219. PAGE 193:14 TO 193:25 (RUNNING 00:00:34.863)

14 Now, over your 45-year career as a  
15 toxicologist, how many different substances have you  
16 worked with toxicologically speaking?  
17 A I've seen the toxicology profiles of at  
18 least 1,000 products.  
19 Q And out of the at least thousand products  
20 that you have worked with as a toxicologist, how does  
21 glyphosate compare regarding -- with regard to  
22 toxicity?  
23 A Of all the compounds I assist during my  
24 whole career, glyphosate is certainly one of the  
25 least toxic I've ever seen.

220. PAGE 194:05 TO 194:24 (RUNNING 00:00:51.346)

05 Q Now, what do toxicologists call the body  
06 of studies, the group of studies and scientific data  
07 regarding a particular substance like glyphosate?  
08 A As a toxicology dossier.  
09 Q Okay. So the dossier.  
10 How large is the toxicology dossier on  
11 glyphosate?  
12 A The toxicology dossier of glyphosate is

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13 actually the largest I've ever seen in my whole  
14 career.  
15 Q Now, when glypho -- glyphosate is used,  
16 of course, to kill weeds, right?  
17 A Yes.  
18 Q How does it do that? What does it do to  
19 weeds that makes them die?  
20 A It inhibits specifically an enzyme that  
21 is responsible for the production of an amino acid,  
22 which is very essential for the survival of the  
23 plant. When that enzyme is blocked, then the plant  
24 actually starves to death.

**221. PAGE 195:05 TO 195:08 (RUNNING 00:00:10.859)**

05 Q The enzyme that glyphosate blocks in  
06 plants, does that exist in humans?  
07 A No, it does not exist in humans and it  
08 does not exist in all mammals.

**222. PAGE 195:14 TO 196:04 (RUNNING 00:00:52.711)**

14 Q Is it possible for glyphosate to harm  
15 humans or cats and dogs and cows and other mammals  
16 through the same way that it harms weeds?  
17 A No, that's not possible.  
18 Q I want to talk for a minute about the  
19 issue of exposure. Would you please explain to the  
20 jury why toxicologists care about exposure.  
21 A Actually, the compound is toxic when the  
22 dose is high enough to exert a toxic action. So  
23 there are chemicals with a low potential of toxicity  
24 and a high potential of toxicity. The chemicals with  
25 a low potential of toxicity need much higher doses to  
00196:01 cause illness in man; whereas, the chemicals with a  
02 high potential for toxicity only need very lower  
03 doses and even very minor doses to cause illness in  
04 man.

**223. PAGE 198:04 TO 198:19 (RUNNING 00:00:58.118)**

04 In the real world, what is the level of  
05 exposure that humans have to glyphosate?  
06 A The level of exposure is very low, and it  
07 has been demonstrated in a farm family study where  
08 glyphosate exposure in farmers has been monitored by  
09 analyzing glyphosate in urine, and from that project,  
10 which has been, you know, carried out on at least  
11 50 -- something like 50 farms -- farmers and their  
12 families, we could assess that the quantity that has  
13 been absorbed after one day of using glyphosate and  
14 applying glyphosate on surfaces as high as 400 acres  
15 per day, that the quantity that is absorbed that day  
16 is actually about even more than 10 million times  
17 lower than the quantities that in one day we had to  
18 use in animals in order to, you know, to assess  
19 possibly carcinogenicity.

**224. PAGE 205:04 TO 205:16 (RUNNING 00:00:34.059)**

04 Q Now, you said that Monsanto -- we've just  
05 been talking about long-term cariogenicity studies,  
06 cancer studies of glyphosate.  
07 A Right.  
08 Q Not of Roundup.  
09 Has Monsanto done long-term cariogenicity  
10 studies of Roundup?  
11 A These type of studies were not carried

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12 out because they are scientifically of no added value  
13 for a very simple reason: If you administer Roundup  
14 to, you know, experimental animals for their  
15 lifetime, they actually will die from the surfactant  
16 before they ever have the occasion to develop cancer.

**225. PAGE 206:03 TO 206:08 (RUNNING 00:00:07.474)**

03 Surfactants are in dishwashing liquid.  
04 A Yes.  
05 Q They're in bar soap.  
06 A Yes.  
07 Q They're in shampoo.  
08 A Yes.

**226. PAGE 206:14 TO 206:16 (RUNNING 00:00:04.493)**

14 Q They're in substances that we use to  
15 spray on the walls of our house to clean it?  
16 A Yes.

**227. PAGE 206:24 TO 207:15 (RUNNING 00:00:56.311)**

24 Q And what happens to an animal or a person  
25 if they drink, consume surfactants at the levels that  
00207:01 you would have to give in a long-term carcinogenicity  
02 study?  
03 A As surfactants have the characteristic to  
04 be irritating to mucous membranes, so if you drink --  
05 if you are, from a gastrointestinal point of view,  
06 are exposed to high concentrations of surfactants,  
07 you actually produce a chronic irritation of the  
08 mucous membranes of the gastrointestinal tract, and  
09 that causes an imbalance of electrolyte exchange, and  
10 the result is that, you know, there will be a lot of  
11 water extracted from the bloodstream into the  
12 gastrointestinal tract. Thereby, you will have a  
13 thickening of the blood, which can actually end up  
14 into a hypothalamic shock, and of which animals can  
15 die.

**228. PAGE 208:02 TO 208:08 (RUNNING 00:00:23.566)**

02 Q Now, the jury has heard that a lot of the  
03 studies on glyphosate, including glyphosate cancer  
04 studies, were performed by Monsanto, for example, at  
05 the Environmental Health Lab in St. Louis.  
06 How do regulators know that they can  
07 trust studies done by industry labs like the  
08 Environmental Health Lab at St. Louis?

**229. PAGE 208:13 TO 209:06 (RUNNING 00:00:39.175)**

13 A The -- the laboratories for toxicology  
14 studies are carried out for regulatory purposes.  
15 They need to be accredited for good laboratory  
16 practices. That means they will have to follow  
17 extremely stringent procedures of quality control to  
18 make sure that processes are followed, to make sure  
19 that at all levels of data production, these data are  
20 controllable and can be checked by the authorities.  
21 Q Now, you said "good laboratory  
22 practices."  
23 A Mm-hmm.  
24 Q Is that your term?  
25 A No, that's the official term which has  
00209:01 been at the highest level possible applied at OECD  
02 where at the first time the "good laboratory  
03 practices" have been defined.

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04 Q Is one of the chapters in your book on  
05 good laboratory practices?  
06 A Yes.

**230. PAGE 209:10 TO 209:12 (RUNNING 00:00:05.904)**

10 Q And have you done good laboratory  
11 practices inspections?  
12 A Yes.

**231. PAGE 209:21 TO 209:24 (RUNNING 00:00:13.040)**

21 Q How do regulators know that industry labs  
22 that are following good laboratory practices aren't  
23 just cooking the data and making stuff up or telling  
24 lies to the regulators?

**232. PAGE 210:01 TO 210:10 (RUNNING 00:00:28.457)**

00210:01 THE WITNESS: The -- the regulatory  
02 authorities organize on a regular basis inspections.  
03 And also when the study reports are submitted to the  
04 regulatory authorities, they should contain all the  
05 inspection reports of the internal quality assurance  
06 unit of the laboratory, which is an independent unit  
07 in the laboratory reporting to a completely  
08 independent management from the laboratory, and  
09 making sure that all the procedures are in place and  
10 that all the inspections are documented.

**233. PAGE 210:24 TO 211:01 (RUNNING 00:00:09.994)**

24 Q Why -- how do we know that the people who  
25 are watching the scientists and watching the  
00211:01 procedures are following the rules?

**234. PAGE 211:03 TO 211:15 (RUNNING 00:00:41.335)**

03 THE WITNESS: There is -- the quality  
04 assurance unit within the toxicology laboratory  
05 reporting to outside toxicology laboratory needs to  
06 actually to accept on a regular basis inspections  
07 from the authorities, and when the inspection reports  
08 are acceptable, they acquire what is called a GLP  
09 accreditation. And they need to have the GLP  
10 accreditation at regular renewals of that in order to  
11 stay in function. And when the laboratory has a  
12 quality assurance unit or in its role no  
13 accreditation, this laboratory has no possibility to  
14 submit its test results to the authorities, they will  
15 be refused.

**235. PAGE 211:22 TO 212:16 (RUNNING 00:00:51.402)**

22 Q And the regulators also come in and  
23 perform inspections of the lab and the -- the  
24 independent auditing unit --  
25 A Yeah.  
00212:01 Q -- for the lab as well, right?  
02 A Yes. On a regular basis.  
03 Q I would like to turn to the issue of  
04 Dr. Parry.  
05 When you reached out to Dr. Parry in  
06 1999, you sent him four of the studies that existed  
07 at the time on the subject of genotoxicity, correct?  
08 A Yes.  
09 Q And there were other studies that you  
10 didn't send him at the time, right?  
11 A Well, the study -- well, there were the

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12 studies -- the regulatory studies which have been  
13 produced by Monsanto, they were not sent in the first  
14 place to Dr. Parry for evaluation because they've  
15 been evaluated by the authorities and who came to the  
16 conclusion that glyphosate was not genotoxic.

236. PAGE 212:25 TO 213:03 (RUNNING 00:00:12.090)

25 Q And when he did his initial evaluation,  
00213:01 as you testified earlier, he hadn't yet looked at the  
02 Monsanto studies and the regulatory studies, right?  
03 A Right.

237. PAGE 213:17 TO 213:23 (RUNNING 00:00:20.285)

17 What I'm putting up on the screen is from

 0217-011 -



18 Exhibit 4, Bates number ending 103.  
19 And during Ms. Wagstaff's examination,  
20 she highlighted and asked you about the first  
21 sentence in that first full paragraph on the page,  
22 sir, saying: "The overall data provided by the four  
23 publications" --

238. PAGE 214:04 TO 214:18 (RUNNING 00:00:39.200)

04 "The overall data provided by the four  
05 publications provide evidence to support a model that  
06 glyphosate is capable of producing genotoxicity, both  
07 in vivo and in vitro, by a mechanism based upon the  
08 production of oxidative damage?"  
09 And you talked about that earlier. I  
10 would like to go on and talk about the rest of that  
11 paragraph right now, sir.  
12 It says: "If confirmed, such a mechanism  
13 of genetic damage would be expected to be produced at  
14 high concentrations of the herbicide and would be  
15 relevant only when the antioxidant protective  
16 mechanisms of the cell are overwhelmed."  
17 Did I read that right?  
18 A Yes.

239. PAGE 214:24 TO 215:12 (RUNNING 00:00:34.923)

24 And -- but what I would like you to do  
25 now is explain to the jury what is meant by: You  
00215:01 would expect if there is such a mechanism, if such a  
02 mechanism exists and such a mechanism is confirmed,  
03 then it would be expected to be produced at high  
04 concentrations and would be relevant only when the  
05 antioxidant protective mechanisms of the cell are  
06 overwhelmed.  
07 A Yes.  
08 Q That's a dose statement, correct?

 -KE0217-011 - Clear Attached Exhibit 0217-011



09 A Yes. Yes, correct.  
10 Q Could you explain what he means by the  
11 antioxidant protective mechanisms of the cell being  
12 overwhelmed by high doses of pesticide?

240. PAGE 215:15 TO 216:05 (RUNNING 00:00:50.955)

15 THE WITNESS: The cell disposes of a  
16 whole series of molecules which are of a kind to  
17 neutralize free oxygen radicals. One of those

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18 molecules is, for example, glutathione, and that is  
19 actually a mechanism of the cell to protect itself  
20 against oxidative damage.

21 Now, you can be exposed to a chemical  
22 producing oxidative free radicals, but as long as  
23 those free radicals -- oxygen free radicals are  
24 neutralized by these molecules, nothing is happening  
25 because the cell is fully protected.

00216:01 So only when the stock of those  
02 protective molecules is consumed, then there will be  
03 free oxygen radicals that will not anymore be  
04 neutralized, and they start actually reacting with  
05 constituents of the cell of which DNA.

**241. PAGE 216:07 TO 217:21 (RUNNING 00:01:58.851)**

07 Q So you can have a different outcome with  
08 regard to what happens with oxidative damage at low  
09 doses versus very high concentrated doses; is that  
10 right?

11 A That is right.

12 Q Is that what you found when you actually  
13 did studies of animals and gave them very high doses  
14 orally and intraperitoneally?

15 A Yes.

16 Q Now, Dr. Parry made some recommendations  
17 for possible steps that Monsanto could take in his --  
18 in his various proposals to you, correct?

19 A Yes.

20 Q What did Monsanto do with those  
21 recommendations? What work did it carry out in  
22 response?

23 A We developed a program in order -- in a  
24 stepwise program, and the first step of that program  
25 was, upon request and which we fully accepted, a  
00217:01 repeat of the Bolognesi study. That then we found  
02 deficiencies with the Bolognesi study. The Bolognesi  
03 study was carried out on three animals at only one  
04 dose level. Monsanto carried out, you know, this  
05 assay on ten animals and on two dose levels, and even  
06 investigating the possible influence of the vehicle  
07 for intraperitoneal injection on the outcome of the  
08 study.

09 On top of that, Monsanto added more  
10 elements to the protocol to investigate the nature  
11 and the severity of the cytotoxicity that is produced  
12 after intraperitoneal injection to try to understand  
13 the relationship between cytotoxicity, oxidative  
14 stress and mutagenicity or oxidative damage of DNA.

15 So all these parameters have been  
16 measured in this protocol.

17 Q And these were done in the GLP certified  
18 lab in St. Louis --

19 A Yes.

20 Q -- is that right?

21 A Yep.

**242. PAGE 218:03 TO 218:12 (RUNNING 00:00:31.270)**

03 Q And -- I'm sorry. What other -- what  
04 other modifications and improvements did you make to  
05 the Bolognesi study?

06 A The improvements that were made was, for  
07 example, also the selection of the indicator for  
08 oxidative stress. It was the NADP, nicotinamide  
09 adenine, oxidative stress transcription. It's a  
10 complicated term. But it was at that time the most

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11 recent methodology in order -- in a very sensitive  
12 and specific way to identify oxidative stress.

**243. PAGE 218:18 TO 219:04 (RUNNING 00:00:28.749)**

18 Q Now, you mentioned -- you talked earlier  
19 about how once these results came out, they were  
20 provided to the authorities and they were part of a  
21 poster presentation in San Francisco; is that right?

22 A Yes, that's right.

23 Q And when something is published as a  
24 poster presentation, is it available to the general  
25 scientific community to see and review?

00219:01 A Yes. Exactly.

02 Q And the same results were also published  
03 in 2008 in a paper that you were a coauthor on?

04 A Yes.

**244. PAGE 219:22 TO 220:02 (RUNNING 00:00:15.066)**

 0214 -



22 Q I have marked as Exhibit 18 a  
23 February 19th, 2001 e-mail from Bill Heydens to  
24 Larry Kier, and you're copied on some of the rest of  
25 the thread.

00220:01 Go ahead and take a look at that, sir,  
02 and tell me when you're ready?

**245. PAGE 220:04 TO 220:04 (RUNNING 00:00:02.074)**

04 Yes, I'm ready.

**246. PAGE 220:14 TO 220:19 (RUNNING 00:00:22.441)**

 0214-002 -



14 Q And on the second page of the two pages  
15 of this exhibit is an e-mail from Richard Garnett  
16 dated February 16th, 2001, to you and to Donna  
17 Farmer, Bill Heydens and Bill Graham, reporting on  
18 your meeting with Dr. Parry, correct?

19 A Yes.

**247. PAGE 221:04 TO 221:14 (RUNNING 00:00:24.178)**

04 Q Then "The presentation of the results of  
05 the MON 35050 study changed the mood because it  
06 clarified certain effects found in the Bolognesi and  
07 Peluso papers." Correct?

08 A That's correct.

09 Q And the MON 35050 study is the one that  
10 we were just talking about --

11 A Right.

12 Q -- that you performed improving on those  
13 earlier studies; is that right?

14 A That is correct.

**248. PAGE 224:10 TO 225:15 (RUNNING 00:01:22.915)**

10 Q Okay. Since our -- I'm reading again  
11 from Exhibit 18. "Since our previous discussions  
12 with him, Professor Parry had begun to comprehend the  
13 complexity and range of glyphosate formulations. We  
14 clarified this by reviewing the brands, formulations  
15 and surfactants used in Europe and the rest of the  
16 world. Then reviewed the mutagenicity studies  
17 available for the surfactants used in glyphosate

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18 formulations. We demonstrated with work undertaken  
19 since the previous discussion that structurally  
20 related surfactants, etheramines, do not directly  
21 cause genotoxicity."  
22 And that was an accurate description of  
23 the meeting, correct?  
24 A Yeah. Yes.  
25 Q Now, let's -- I want to go to results.  
00225:01 These were the results of the meeting with Professor  
02 Parry, correct?  
03 A Yes.  
04 Q "Acceptance that glyphosate is not  
05 genotoxic."  
06 And that is acceptance by whom, sir?  
07 A By -- by Professor Parry.  
08 Q "Broad agreement that genotoxic results  
09 in some studies with surfactants arose due to  
10 oxidative damage rather than direct genotoxicity."  
11 Now, when you -- when -- when Richard  
12 Garnett said: "Broad agreement that genotoxic  
13 results in some studies was due to oxidative damage  
14 rather than direct genotoxicity," what studies did he  
15 mean by the "some studies"?

249. PAGE 225:18 TO 226:23 (RUNNING 00:01:05.506)

18 THE WITNESS: Well, I was at the meeting,  
19 so I know what it is about. It was the studies with  
20 intraperitoneal injection.  
21 BY MR. GRIFFIS:  
22 Q "Recognition of the difference of  
23 toxicity between the intraperitoneal and oral  
24 routes" -- and you've been explaining that to us,  
25 right, the difference between the injection into the  
00226:01 belly and drinking?  
02 A Drinking, yes.  
03 Q Drinking.  
04 -- "and that only oral, dermal and  
05 inhalation route are taken into consideration for  
06 classification in the EU." Correct?  
07 A Yes.  
08 Q And why is it that only oral, dermal and  
09 inhalation routes are taken into consideration for  
10 classification of substances -- of the toxicity of  
11 substances in the EU?  
12 A Well, these are the only acceptable  
13 routes of exposure, you know, when, you know, people  
14 get into contact with hazardous chemicals.  
15 Q Is it because humans don't get chemicals  
16 injected directly into their belly?  
17 A Of course not.  
18 Q "Acceptance of the low quality of the" --  
19 how do you pronounce that, sir?  
20 A Lioi.  
21 Q Lioi.  
22 "Acceptance of the low quality of the  
23 Lioi, et al., study."

250. PAGE 227:03 TO 227:04 (RUNNING 00:00:03.961)

03 Q Who was it that was accepting the low  
04 quality of the Lioi study?

251. PAGE 227:06 TO 227:06 (RUNNING 00:00:01.739)

06 THE WITNESS: Professor Parry.

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**252. PAGE 227:08 TO 227:11 (RUNNING 00:00:09.141)**

08 Q "Professor Parry accepted the argument  
09 that no repeat dose study should be necessary on the  
10 basis of the NTP data." Correct?  
11 A Yes.

**253. PAGE 227:15 TO 227:21 (RUNNING 00:00:16.633)**

15 Q And he accepted that you as industry, you  
16 couldn't test other people's surfactants, right?  
17 A Yes.  
18 Q You explained that to him?  
19 A Right.  
20 Q And Dr. Parry no longer requested any  
21 studies on the final formulation; is that right?

**254. PAGE 227:23 TO 228:25 (RUNNING 00:01:13.540)**

23 THE WITNESS: Yes.  
24 BY MR. GRIFFIS:  
25 Q So did -- the results of this meeting  
00228:01 that you attended with Professor Parry and Richard  
02 Garnett, did Professor Parry change his view of what  
03 he thought Monsanto should do next?  
04 A Yes. But he asked for one supplementary,  
05 one additional study.  
06 Q And that was -- show us where that is on  
07 this page, please.  
08 A That is the fourth dash.  
09 Q "Complete the" -- this is under  
10 "Actions," "Complete the MON 35050 study with  
11 intraperitoneal injection of the MON 35035  
12 formulation minus glyphosate." Correct?  
13 A Yes.  
14 Q And did you do that?  
15 A Yes. And there was no difference.  
16 Q Why was it that Dr. Parry's lab didn't  
17 perform the MON 35050 study, sir?

 -KE0214-002 - Clear Attached Exhibit 0214-002



18 A The major reason is because he runs a  
19 non-GLP accredited laboratory, and he didn't have the  
20 capability in doing histopathology studies.  
21 Q He didn't have the capability, why?  
22 A Because he's not a histopathologist. So  
23 you need expertise of histopathologist plus a  
24 completely equipped laboratory to prepare the tissue  
25 samples for microscopic examination.

**255. PAGE 229:24 TO 230:13 (RUNNING 00:00:52.946)**

24 Q And the procedures that exist in GLP labs  
25 to make sure that the data is good, those procedures  
00230:01 don't normally exist in academic labs; is that fair?  
02 A No. That's fair.  
03 Q Sir, has any national or multinational  
04 regulator, like the European Union, the EPA, et  
05 cetera, concluded that glyphosate causes cancer  
06 based on the studies that we've been talking about  
07 today?  
08 A In the European Union, the European  
09 Chemical Agency, and the European Food Safety  
10 Authority reviewed all the studies on genotoxicity  
11 and carcinogenicity of glyphosate, and they came to  
12 the conclusion that glyphosate is not genotoxic and  
13 is not a carcinogen.

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256. PAGE 232:02 TO 232:25 (RUNNING 00:01:09.408)

02 Q What do they do?  
03 A When the pesticide producer wants to put  
04 a pesticide onto the marketplace, he has to produce a  
05 safety package, which is a whole toxicological  
06 dossier, and he has to produce that according to, you  
07 know, internationally agreed test guidelines and  
08 according to good laboratory practices. All the data  
09 that are produced in that context have to be  
10 submitted to the authorities, and the authorities  
11 actually analyze the data from scratch, and they come  
12 to their own conclusions.  
13 Q Do the authorities have experts in  
14 toxicology and other areas that enable them to  
15 actually evaluate the data?  
16 A They have experts in toxicology, and if  
17 they do need experts that are specialized in specific  
18 subparts of toxicology, they have the possibility to  
19 engage in academic toxicology experts to help them in  
20 their assessments.  
21 Q You just spent a significant part of the  
22 last year focusing on all of the toxicology evidence  
23 about whether glyphosate can cause cancer; is that  
24 right?  
25 A Right.

257. PAGE 233:02 TO 233:04 (RUNNING 00:00:07.824)

02 And was it just Monsanto's data and the  
03 public -- publicly available published data that you  
04 looked at?

258. PAGE 233:07 TO 234:15 (RUNNING 00:01:24.783)

07 THE WITNESS: No. Monsanto produced  
08 three carcinogenicity studies, but the total number  
09 of regulatory carcinogenicity studies was 12  
10 carcinogenicity studies, because of the -- a lot of  
11 the carcinogenicity studies have been produced by  
12 other agrochemicals companies putting glyphosate into  
13 the marketplace.  
14 BY MR. GRIFFIS:  
15 Q And did you see all of those studies?  
16 A Yes.  
17 Q How many genotoxicity studies did you  
18 focus on as part of your analysis?  
19 A In total, it was about 80 genotoxicity  
20 studies.  
21 Q That's eight zero?  
22 A Eight zero.  
23 Q Did those -- did the regulators in Europe  
24 that you were interacting with look at the Bolognesi  
25 study and the other studies that you initially sent  
00234:01 to Dr. Parry in 1999?  
02 A Yes.  
03 Q That was among the body of studies that  
04 they considered in reaching their conclusions?  
05 A It was the body of published literature  
06 which also taken into consideration in the  
07 assessment.  
08 Q And what was their conclusion?  
09 A Their conclusion is that the overall  
10 weight of evidence and analysis indicated that  
11 glyphosate was not genotoxic. And that conclusion  
12 was reached at the European chemical -- the agency in  
13 unanimity of all member states.

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14 Q How many member states were involved?  
15 A 28.

259. PAGE 235:03 TO 236:02 (RUNNING 00:01:11.533)

03 Q Good afternoon, Dr. Martens. I am here  
04 to ask just some follow-up questions. And so as a  
05 result, my questions may bounce around a little as I  
06 tried to just write down notes when your attorney was  
07 asking you questions.

08 Fair?

09 A That's fair.

10 Q Okay. So when we discuss dosage, that's  
11 relating to the risk assessment, correct?

12 A Yes.

13 Q Okay. And there's no bright line on  
14 dosage -- what dosage will cause an effect in a  
15 person, correct?

16 A Let me give you a little bit in a more  
17 precise explanation is, when you study the effects of  
18 a chemical and function of dose, that is a -- what is  
19 called the dose-effect relationship establishment.  
20 Okay?

21 Q Mm-hmm.

22 A From a dose-effect relationship  
23 establishment, you derive from animal studies the  
24 safe dose. That means the highest dose at which you  
25 don't see any effect. And that dose, when that is  
00236:01 confronted with the level of exposure in reality, in  
02 real life, that is risk assessment.

260. PAGE 236:19 TO 238:17 (RUNNING 00:02:06.219)

19 Q Okay. And, in fact, it is very common in  
20 toxicology to use high dose testing in animals,  
21 correct?

22 A Yes.

23 Q And, in fact, it is more common than not  
24 to use high dose testing in animals, correct?

25 A Yes.

00237:01 Q Okay. And there's a good reason for  
02 that, right?

03 A Yes.

04 Q Okay. And what's the reason?

05 A The reason is that for testing in  
06 animals, we are obliged by international, you know,  
07 test guidelines to dose up until we have very clear  
08 signals of toxicity. And then we select doses, and  
09 the lowest dose is the dose at which we don't expect  
10 to see toxicity, and there is an intermediate dose.  
11 And that is -- the reason for that is actually to  
12 establish a dose-effect relationship.

13 Q Okay. And also if the normal incidence  
14 of some effect is, let's say, one in a thousand or  
15 one in 5,000, that means that if you -- it would take  
16 a thousand or 5,000 animals to show that one time,  
17 and tests don't use that many animals, do they?

18 A They -- well, there is a compromise that  
19 you -- you will have to achieve, and the compromise  
20 for long-term carcinogenicity test is that you use 50  
21 to 60 animals per sex per dose level.

22 Q Exactly. So if you're only using 50 or  
23 60 animals per sex per dose, you need to really use a  
24 high dose analysis, correct?

25 A Well, you need to actually to -- to dose  
00238:01 up, up to the maximum tolerated dose, to make sure if  
02 the compound is carcinogenic, you won't miss it.

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03 Q Correct. And so when your attorney was  
04 asking you all about the dosage that was used in  
05 these studies that you analyzed, they were following  
06 standards and practices that scientists use all over  
07 the world, correct?  
08 A Yes.  
09 Q They weren't doing anything abnormal,  
10 correct?  
11 A No.  
12 Q They were following the same practices  
13 that scientists follow all over that give us results  
14 that we -- that are accepted all over the world,  
15 correct?  
16 A Yes, insofar they follow the  
17 international accepted test guidelines.

**261. PAGE 239:19 TO 239:25 (RUNNING 00:00:22.894)**

19 Q Okay. You will agree that animal testing  
20 is very expensive.  
21 A Absolutely.  
22 Q Do you know the EPA's analysis or  
23 position on what a, quote, unsafe chemical is?  
24 A I don't recall that specific test, no.  
25 Or that specific text.

**262. PAGE 240:08 TO 240:21 (RUNNING 00:00:33.486)**

08 Q Sure. I'm just wondering because you  
09 work and practice and most of the -- the stuff that  
10 you do regulatory-wise is in Europe, correct?  
11 A Yes.  
12 Q You -- what portion of your practice do  
13 you interact with the EPA and its guidelines?  
14 A Almost zero.  
15 Q Almost zero?  
16 A Yes.  
17 Q So you may not be familiar with the EPA's  
18 definition of what an "unsafe chemical" is, correct?  
19 A I must have been aware of this before I  
20 joined the pharmaceutical company. So sometime ago,  
21 yes.

**263. PAGE 241:14 TO 242:05 (RUNNING 00:00:28.333)**

14 A Yes.  
15 Q They were the Lioi -- how do you  
16 pronounce that one again?  
17 A Lioi.  
18 Q Lioi. The two Lioi papers.  
19 A No, one Lioi paper.  
20 Q One Lioi paper, the Rank --  
21 A Yes.  
22 Q -- the Bolognesi and the Peluso, right?  
23 A Yes.  
24 Q Were those studies conducted in labs that  
25 were following good laboratory practices?  
00242:01 A No.  
02 Q No. And how do you know that?  
03 A Because these were academic labs which  
04 were not accredited for GLP; otherwise, that would  
05 have been -- appeared in their publications.

**264. PAGE 242:24 TO 243:12 (RUNNING 00:00:31.423)**

24 Q Okay. And -- and your counsel said even  
25 if a lab wasn't GLP operating, it could still be a  
00243:01 good lab. Correct?

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02 A Yes.  
03 Q Okay. Just because something's not GLP  
04 doesn't mean it's a bad lab, right?  
05 A It doesn't mean it's bad science.  
06 Q Okay. And just because something is a  
07 GLP lab doesn't mean it's good science, right?  
08 A That's right.  
09 Q So the GLP is just sort of a shortcut  
10 like a marriage is a shortcut to a commitment, right?  
11 A No, no, no. The GLP is for what I would  
12 call a process control.

265. PAGE 243:18 TO 244:19 (RUNNING 00:00:58.215)

18 THE WITNESS: GLP is a process control  
19 part, and has nothing to do with the science. It's  
20 all to do with data control, data access, data  
21 quality assurance.  
22 BY MS. WAGSTAFF:  
23 Q Okay.  
24 A And there is a science part, and the  
25 science part is taken care of in accordance with the  
00244:01 internationally agreed test guidelines.  
02 Q Okay. So I think we're on the same page  
03 now that GLP labs can have good or bad science --  
04 A Mm-hmm.  
05 Q -- and non-GLP labs can have good or bad  
06 science.  
07 A Yes.  
08 Q Okay. It really depends on the  
09 scientists.  
10 A It depends on the scientists and the  
11 structure of the laboratory.  
12 Q Okay. Gotcha.  
13 And when was this GLP accreditation  
14 process created?  
15 A It was created in the -- the end of the  
16 '70s, beginning of the '80s.  
17 Q Okay.  
18 A Yeah, because it took a long time to  
19 implement it in all laboratories, yeah.

266. PAGE 244:23 TO 245:02 (RUNNING 00:00:16.962)

23 Q Is it -- I assume, and correct me if I'm  
24 wrong, but every laboratory has to be GLP accredited.  
25 A Every laboratory that produces data,  
00245:01 safety data that have to be submitted for regulatory  
02 reasons needs to be GLP accredited.

267. PAGE 246:05 TO 247:25 (RUNNING 00:01:47.252)

05 Q So you're not involved in all of the --  
06 the glyphosate reregistration processes over here in  
07 the United States.  
08 A No. It's Europe.  
09 Q Okay. Now, you testified earlier that  
10 Monsanto has done three long-term cancer studies --  
11 A Yes.  
12 Q -- involving glyphosate; is that right?  
13 A Yes.  
14 Q I believe you testified that two were rat  
15 studies and one was a mouse study.  
16 A Yes.  
17 Q Is that right?  
18 Who conducted those studies?  
19 A There was -- I've got to recall -- the  
20 Knezevich and Hogan study was done by a contract

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21 laboratory. The Stout and Ruecker study was done at  
22 Monsanto. Yes.  
23 Q Okay. So that's two studies. What about  
24 the third?  
25 A The third I believe is the Lankas study,  
00247:01 and I will have to check that out where it was  
02 conducted. Yeah, I've got to check that out.  
03 Q Okay. So when you say Monsanto did three  
04 studies, you mean they funded three studies?  
05 A They commissioned three studies, either  
06 in their laboratory or in contract laboratories.  
07 Q Okay. And are those studies in published  
08 literature?  
09 A No.  
10 Q No. So they're private --  
11 A Well, they've been summarized in reviews,  
12 like, for example, the Williams review.  
13 Q Okay. Which is a Monsanto commissioned  
14 review as well.  
15 A It's commissioned to an organization that  
16 took care of the selection and the recruitment of  
17 scientists to do that review.  
18 Q Yeah. So Monsanto did studies and then  
19 hired someone to review the studies that they  
20 conducted, right?  
21 A Yeah. In order to publish it. Yeah.  
22 Q Okay. But other than using Monsanto to  
23 do the studies and then Monsanto to review the  
24 studies, no one independently has peer reviewed those  
25 studies, correct?

**268. PAGE 248:03 TO 248:11 (RUNNING 00:00:11.670)**

03 THE WITNESS: These studies have been  
04 peer reviewed by the authorities.  
05 BY MS. WAGSTAFF:  
06 Q What authorities?  
07 A Well, the authorities over all in the  
08 world.  
09 Q Okay. So does the EPA have all of these  
10 studies?  
11 A Yes.

**269. PAGE 248:18 TO 249:10 (RUNNING 00:00:34.410)**

18 Q Okay. And these other -- and then I  
19 think you testified that there were eight other  
20 studies.  
21 A Yes, in total there are 12 carcinogenic  
22 studies.  
23 Q Okay. So then I guess that would be nine  
24 other studies, right?  
25 A Yes.  
00249:01 Q And who created those studies?  
02 A These studies have been commissioned by  
03 other companies that put glyphosate into the  
04 marketplace.  
05 Q Okay. And where would we find those  
06 studies?  
07 A The best way and how to get insight in  
08 those studies is actually to read the paper of Greim,  
09 et al., where the results of those studies are  
10 summarized.

**270. PAGE 249:20 TO 250:02 (RUNNING 00:00:22.834)**

20 Q Okay. So there are -- there are 12  
21 studies that assess the carcinogenicity of glyphosate

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22 that's -- that's not available for the public to  
23 review or access; is that correct?  
24 A That's not entirely correct, because the  
25 analysis, the evaluation, and the complete  
00250:01 description of the studies have been published by  
02 Greim, et al.

**271. PAGE 250:10 TO 251:02 (RUNNING 00:00:44.138)**

10 Q Okay. Who is he?  
11 A He is a cancer specialist, a German  
12 cancer specialist.  
13 Q Okay. And who does he work for?  
14 A He's got -- well, he used to work  
15 normally for government. He was the head of the MAC  
16 Commission in Germany, who was responsible for the  
17 environmental exposure levels for carcinogens.  
18 Q Okay. And who paid for that study?  
19 A All the companies that produced the  
20 studies contributed to the -- this project.  
21 Q Okay. So the companies get together and  
22 they do these studies where no one gets the results  
23 or the data, and then they pay someone to summarize  
24 all their studies --  
25 A Yes.  
00251:01 Q -- but they don't give anyone the actual  
02 studies.

**272. PAGE 251:11 TO 251:22 (RUNNING 00:00:27.268)**

11 Q Is that correct?  
12 A The -- under a confidentiality agreement,  
13 these studies must have been provided to Dr. Greim.  
14 Q Okay. So I could not -- could not find  
15 those studies anywhere.  
16 A If you would be a toxicologist and you  
17 would be under contract with a company, then you  
18 would gain access to those studies.  
19 Q Okay. So I need to be employed by one of  
20 those companies and sign a confidentiality agreement  
21 to get access to these 12 cancer studies; is that  
22 correct?

**273. PAGE 251:24 TO 252:18 (RUNNING 00:00:51.901)**

24 too fast. If you would be an independent consultant,  
25 like I am --  
00252:01 Q Mm-hmm.  
02 A -- and I have been granted access to all  
03 these studies for my -- my work in the European  
04 Union, I signed confidentiality agreements with every  
05 one of all those committees to gain full access to  
06 these studies.  
07 Q Okay. And how long did you work for  
08 Monsanto? How many years?  
09 A It was about 15 years.  
10 Q And you -- you view yourself as an  
11 independent consultant?  
12 A Yes.  
13 Q Okay. So the Farm Family Exposure Study  
14 that you've been talking about, who funded that  
15 study?  
16 A That was a Monsanto designed study.  
17 Q So Monsanto paid for that study to occur?  
18 A And Monsanto executed the study, yeah.

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**274. PAGE 252:19 TO 253:03 (RUNNING 00:00:21.929)**

19 Q Okay. So other than for Monsanto, any  
20 other company, have you ever interacted with the EPA,  
21 the United States EPA?  
22 A No.  
23 Q So the only time you've interacted with  
24 the EPA is in your role as a Monsanto employee?  
25 A Yes. And it was only for one substance,  
00253:01 I believe.  
02 Q And what substance was that?  
03 A Acetochlor.

**275. PAGE 253:13 TO 253:17 (RUNNING 00:00:12.652)**

13 Q You testified that in the Farm Family  
14 Exposure, which is Monsanto's paid-for study, that  
15 only 40 -- that 40 percent did not have glyphosate in  
16 their urine. Was that your testimony?  
17 A Yes.

**276. PAGE 254:05 TO 254:15 (RUNNING 00:00:18.341)**

05 BY MS. WAGSTAFF:  
06 Q And is it your testimony as you sit here  
07 today that POEA is like soap?  
08 A It's a detergent.  
09 Q So is it your testimony that POEA is like  
10 soap?  
11 A Well, soap is a detergent. It acts like  
12 soap --  
13 Q Yeah.  
14 A -- and soap is a very general name for  
15 detergent.

**277. PAGE 254:22 TO 255:02 (RUNNING 00:00:07.670)**

22 Q So, yes, it is your testimony that POEA  
23 is like soap?  
24 A It's like soap --  
25 Q Yeah.  
00255:01 A -- and the right definition is  
02 "surfactant."

**TOTAL: 1 CLIP FROM 1 DEPOSITION (RUNNING 02:25:53.247)**