EXHIBIT 4

UNITED STATES DISTRICT COURT

NORTHERN DISTRICT OF CALIFORNIA

IN RE: ROUNDUP PRODUCTS LIABILITY LITIGATION — MDL No. 2741

Case No. 16-md-2741-VC

This document relates to:

Hardeman v Monsanto Co., et al.

Case No. 3:16-cv-00525

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VIDEO DEPOSITION OF CHADI NABHAN, M.D.

December 14, 2018

8:39 a.m.

Chicago Marriott O'Hare

8835 West Higgins Road, Park Ridge, Illinois

Deanna Amore, CRR, CSR, RPR, 084-003999
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ALSO PRESENT:
Anthony Micheletto, Videographer

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I N D E X

EXHIBITS

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THE VIDEOGRAPHER: We are now on the record.
My name is Anthony Micheletto. I'm the videographer for Golkow Litigation Services.
Today's date is December 14, 2018. The time is 8:39 a.m. as indicated in the video screen.
This video deposition is being held in Chicago, Illinois, in the matter of Hardeman versus Monsanto Company, et al., Case No. 316-cv-00525 in the United States District Court, Northern District of California.
Our deponent today is Chadi Nabhan MD, MBA.
Will counsel please identify themselves for the video record?
MS. WAGSTAFF: Aimee Wagstaff from Andrus Wagstaff in Denver, Colorado, and I'm here with my partner Kathryn Forgie from Oakland, California.
MS. GREENWALD: Robin Greenwald, Weitz & Luxenberg. I'm one of the plaintiff attorneys in this litigation.
MR. STEKLOFF: Brian Stekloff, Wilkinson Walsh on behalf of Monsanto.
MS. KASTEN: Cali Cope-Kasten, Wilkinson Walsh, on behalf of Monsanto.
MR. SLONIM: Bert Slonim, Arnold & Porter, on

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behalf of Monsanto.
THE VIDEOGRAPHER: Our court reporter today is Deanna Amore. Please swear in the witness.
(Whereupon, the witness was duly sworn.)
THE WITNESS: I do.
MS. WAGSTAFF: So before we start, I just wanted to put on the record that Plaintiffs Gebeyehou, Hardeman, and Mrs. Stevick are offering Dr. Nabhan today for specific causation opinions, and to the extent that anything in his report goes to general causation, it is either as a background to his -- or in support of his specific causation opinion or it is consistent with the general causation opinions that Judge Chhabria has allowed in this MDL.
MR. STEKLOFF: I just reserve the right to -- I mean, it seems like we might be seeing enough issues. So potentially we can agree in front of Judge Chhabria on how specific causation experts are going to be allowed to delve into or touch on generic causation opinions, and so I think we can explore that a little bit today potentially with the doctor. But I preserve all rights -- I reserve all rights to challenge any opinions in his report,

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including anything that's general causation or anything that has been excluded under Judge Chhabria's July 1 -- July 10, 2018, opinion on general causation.

Good morning, Doctor.

THE WITNESS: Good morning.

CHADI NABHAN, M.D.,

called as a witness herein, having been first duly sworn, was examined and testified as follows:

EXAMINATION

BY MR. STEKLOFF:

Q. You've been deposed before; right?

A. I have been.

Q. So you are familiar with the background rules of how these go forward?

A. Yes.

Q. So I'm just going to cover two. If you need a break for any reason, as long as a question is not pending, just let me know.

A. Sure.

Q. And if you answer a question, I'm going to assume that you understood the question. Is that fair?

A. To the best of my ability, yes.

Q. You'll let me know if you don't understand

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something that I ask?

A. Yes.

MS. WAGSTAFF: Objection.

BY MR. STEKLOFF:

Q. Which may happen, I will tell you.

And so I don't get it wrong, how do you pronounce your last name?

A. Nabhan.

Q. Nabhan. Okay.

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Page 10

[redacted]

Page 11

[redacted]

Page 12

[redacted]

Q. Do you know if Mr. Hardeman was using Roundup in 2014?
A. Yes, that's when he stopped, I believe.
Q. When did he stop?
A. [redacted]

[redacted]

Q. Does it matter when he stopped using Roundup -- I'll start over. I'll strike that.

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Does when he started using -- story.
Does when he stopped using Roundup impact your opinions in any respect?
A. No.
Q. It wouldn't have mattered?
A. Well, I mean, it matters when he started more important; right? I mean, he started sometime in the '80s, late '80s, and he stopped in 2014. So what matters to me is the duration of exposure, and so if he stopped in 2014 or middle 2014, late 2014, it doesn't really impact how long he's been exposed to. But if he started using it in 1987 and he stopped in 1988, one year, it would matter, but in this case, he's been exposed to it for such a long period of time that stopping a couple of months later or earlier would not really impact the opinion.
Q. What if he had stopped in 2013, would it impact your opinion?
A. Again, you'll have to -- this is a very hypothetical question. You'll have to look at the exposure for every single year of use. So I will -- you know, I mean, probably 2013, it still wouldn't matter because you have to look at how many hours and exposure he's had in any given year

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and whether that exposure collectively is analogous or similar to what has been published in the epidemiological literature [redacted].

Q. But take Mr. Hardeman's testimony about his use of Roundup. Let's say he had stopped in December of 2013 with the exact same use he testified to. Would that impact your opinion at all about what caused his lymphoma?

A. I don't believe 2013 would have mattered.

Q. And so for you to form an opinion that Roundup or glyphosate is a substantial contributing factor to an individual's non-Hodgkin lymphoma, they do not have to be actively using non-Hodgkin lymphoma at the time of their --

MS. WAGSTAFF: I don't think you meant to say that.

THE WITNESS: Actively using Roundup.

BY MR. STEKLOFF:

Q. Okay. And so for you to form an opinion that Roundup or glyphosate is a substantial contributing factor in an individual's non-Hodgkin lymphoma, they do not have to be actively using Roundup at the time of -- at the time that their cancer first develops; is that fair?

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A. Yeah, they don't need to be actively using it at the time of diagnosis, if they have used it enough during their lifetime to a degree that meets what has been published in the epidemiological literature.

Q. And it's your understanding, based on Mr. Hardeman's testimony, that he used Roundup beginning in the late 1980s; correct?

A. Yes. Initially, initially, he used it a little bit, not too much, and I think he got to know about it from his landscaper in the original property he lived in. I believe he sold that property, and he moved to a much bigger property after that, and that's when he started using it himself for about seven, eight months of the year and several hours each month.

Q. For several years; right?

A. No, for more than -- for about 27 years, until 2014.

Q. Yes.

[redacted]

A. Yes. I mean, there is nothing in the

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[redacted]

Q. So I want to shift topics a little bit. I am going to hand you the report in Mr. Hardeman's case, and I'll mark it as Exhibit 1.

(Whereupon, Exhibit 1 (Hardeman) was marked for identification.)

BY MR. STEKLOFF:

Q. Dr. Nabhan, this is a copy of your report in Mr. Hardeman's case; correct?

A. Yes.

Q. And did you draft this report -- I'm not asking for any attorney-client privileged information -- but did you draft this report yourself?

A. I did.

Q. You took pen to paper and put everything -- you wrote everything yourself?

A. Explains some of the typos, yes.

Q. And does this report contain all of the opinions that you intend to offer in Mr. Hardeman's case?

A. It does.

Q. I saw yesterday -- I don't have it with me -- that counsel provided me with a supplemental

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reliance list where you reviewed some of the reports that Monsanto has offered through its experts; is that correct?

A. Yes, I was provided case specific experts' report in Mr. Hardeman's case, and some of these reports had a lot of references. Some of them I had reviewed previously, and some of them I reviewed recently at a higher level.

Q. And does that change any of the opinions that you intend to offer in this case?

A. No, they don't.

Q. But understanding if I ask you something new today, I can find anything you're going to say at trial in Mr. Hardeman's case in this document; is that fair?

A. I hope so.

MS. WAGSTAFF: Object to form.

BY MR. STEKLOFF:

Q. And you previously provided a general causation report in the MDL in 2017. Do you recall that?

A. I have.

Q. And you testified in front of Judge Chhabria?

A. I have.

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Q. And you understand that those opinions that you offered in that report cannot be offered at the trial in Mr. Hardeman's case?
MS. WAGSTAFF: Object to form. That's not exactly what it said, but that's a legal question that Dr. Nabhan probably has no idea what the Daubert order said or doesn't say.
MR. STEKLOFF: That's fair. I'll ask a different question.
BY MR. STEKLOFF:
Q. Have you read Judge Chhabria's Daubert opinion?
A. I have.
Q. Well, we'll go through this report later.
Did you bring any other materials with you today in terms of notes that you might have or anything along those lines?
A. [redacted]

[redacted]

A. Yes.
Q. I want to talk to you about your current medical practice. What are you doing now?
A. My current role?
Q. Yes.
A. So I'm currently a chief medical officer at Cardinal Health Specialty Solutions, which is a division within Cardinal Health, and in that capacity, I work with oncologists as well as with various manufacturers to provide strategic health, making sure they are able to survive in an ever-changing health care environment. So I do not actively see patients at the present time, if that's your question.
Q. How long have you been in that position?
A. About two and a half years, give or take.
Q. So when was the last time you were actively seeing patients?
A. I resigned from the University of Chicago on August 12, 2016.
Q. And what was your medical practice -- what role were you playing when you were at -- what role

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were you playing when you were at University of Chicago?
A. So the University of Chicago, my administrative role was a medical director of the clinical cancer center and cancer clinics. I oversaw the clinical operations of the outpatient cancer center, and we saw at the time when I was there about 48,000 visits. The last fiscal year we had over 5,000 new patients at the time. I was also overseeing the international office and the international programs for cancer and strategically helping international patients coming to the University of Chicago for cancer opinions.
In addition to that, I had a very active lymphoma practice. So I was part of the lymphoma group, and I was active in clinical trials for lymphoma, as well as teaching medical students, residents and fellows.
My research in lymphoma continued beyond leaving the University of Chicago. It shifted a little bit into health economics outcomes research, patient-reported outcomes, oncology care delivery with a lot of focus on lymphoma. At the last American Society of Hematology meeting, which we just finished two weeks ago, actually, in

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San Diego, I had nine posters and nine presentations, all of them on lymphoid malignancies, but that was my role at University of Chicago at the time.
Q. And you've treated a number of patients with non-Hodgkin lymphoma; correct?
A. Hundreds.
Q. And same with diffuse large B-cell lymphoma?
A. Hundreds.
Q. And you've never told a patient that his or her non-Hodgkin lymphoma was caused by Roundup or glyphosate; correct?
A. Not by Roundup. But I did take care of some farmers where I would discuss pesticide exposure in my clinical practice.
Q. But to answer my question, you've never told a patient that his or her non-Hodgkin lymphoma was caused by Roundup or glyphosate; correct?
A. I did not.
Q. And you've never -- strike that.
When you were at the University of Chicago, you never told any of your fellow oncologists that you thought Roundup or glyphosate was a cause -- a general cause of

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non-Hodgkin lymphoma; correct?
A. We talked about pesticides in general. I did not say about Roundup specifically.
Q. Okay. And that would be true if I asked you about -- beyond oncologists, if I asked you about pathologists that you were working with as well; correct?
A. Yes.
Q. And that would be true of the medical students that you were teaching. You never told them that you thought Roundup or glyphosate caused non-Hodgkin lymphoma; correct?
A. Yes, I stated we talked about pesticides in general.
Q. That is also true -- you never told residents or fellows that you thought glyphosate or Roundup caused non-Hodgkin lymphoma; correct?
A. Correct.
Q. And as the chief medical officer at Cardinal, you said that you currently work with a number of oncologists; correct?
A. Yes.
Q. And you've never told those oncologists that you believe that Roundup or glyphosate caused non-Hodgkin lymphoma; correct?

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A. In my current role, this subject would not come up because I work more in oncology and health care delivery and several educational platforms, but the short answer to your question, no, I have not.
Q. But you do work with oncologists who are treating patients?
A. Yes.
Q. And they are treating patients who are diagnosed with non-Hodgkin lymphoma; correct?
A. Yes.
Q. And they care about their patients; correct?
A. Absolutely.
Q. Now, you mentioned that you recently presented at a conference of the American Society of Hematology?
A. Yes, every December we have our annual meeting, and the last meeting we had was two weeks ago.
Q. And did you present at that conference?
A. Yes.
Q. And you did not present on glyphosate or Roundup-related issues; correct?
A. That was not a topic of my presentations.

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Q. You've never presented, at any conference, your opinions that glyphosate or Roundup causes non-Hodgkin lymphoma; correct?
A. I did not.
In many of the prior talks and prior meetings, my focus was mainly on treatment of lymphoma and clinical trials and novel agents. So it was not a topic that I presented on or lectured upon.
Q. And you've never published any peer-reviewed literature related to the association you claim exists between glyphosate and Roundup and non-Hodgkin lymphoma; correct?
A. I did not publish on that.
Q. You are not in the process of drafting anything; correct?
A. Not right now.
Q. When you were treating patients at the University of Chicago, you never noted in the medical records of any of your patients that glyphosate or Roundup caused a patient's cancer; correct?
A. As I said, we talked about pesticides in general in some of the patients that worked in farming, but I did not write that in the medical

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records on Roundup, no.
Q. And when you say "pesticides in general," you never spoke even to any of your farming patients, agriculture patients -- patients that were involved in agriculture specifically about Roundup or glyphosate; correct?
A. Not specifically, no.
Q. At Cardinal Health you've never given a lecture to anyone, whether it's administrators, oncologists or other entities that you're working with, regarding your opinions about glyphosate and Roundup and that they cause non-Hodgkin lymphoma; correct?
A. I did not.
Q. And you are not conducting any research, independent research that aren't litigation based about the relationship between Roundup or glyphosate and non-Hodgkin lymphoma; correct?
MS. WAGSTAFF: Object to form.
THE WITNESS: Not at the present time.
BY MR. STEKLOFF:
Q. Have you resigned -- this is not a pejorative question, but do you have active credentials at the University of Chicago Hospital or another hospital?

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A. No, I resigned those.
Q. And so it's been approximately over two years since you've seen patients?
A. In clinical practice. A lot of my patients actually still call me and text me, and we actually do meet at coffee shops to talk about their cases. But in clinic, yes.
Q. And with those patients, you haven't discussed any -- that you've continued to talk in the last few years, you haven't discussed glyphosate or Roundup use, have you?
A. We have not.
Q. And some of those patients have had non-Hodgkin lymphoma?
A. 90 percent, actually. I just got a text last week from a patient of mine asking me about their treatment. When you form a bond with patients over many years, people trust you and they still consult with you even though you are not actively in clinical practice. And it's humbling, and it's wonderful to see.
Q. That's a great thing.
But you don't know if any of those patients have ever used Roundup or glyphosate; is that correct?

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A. I don't know.
Q. I received some invoices from counsel yesterday about your work in the three cases, and I'm only here to ask about the Hardeman case. But how many hours have you invoiced thus far in the Hardeman case?
A. I honestly haven't sent. This is what I collected so far, and there are more hours. I have spent a lot this week but I haven't sent an actual invoice. I plan on doing that at the end of the year. Maybe I can --
MS. WAGSTAFF: This one has notes on it. I am sure he has it.
BY MR. STEKLOFF:
Q. I'll hand you what I received yesterday and you can just look at it.
A. Sure.
(Whereupon, Exhibit 2 (Hardeman) was marked for identification.)
BY MR. STEKLOFF:
Q. Dr. Nabhan, I'm handing you what I have marked as Exhibit 2. Is this a document that you would have prepared?
A. Yes.
Obviously, more hours have been added

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since December 5 to prepare for this, but this is up until December 5.
Q. So I see -- I haven't done the math ahead of time -- 41 hours that you've spent on the Hardeman case; correct?
A. Up until December 5.
Q. At $550 per hour?
A. Yes.
Q. Do you charge the same rate for deposition testimony?
A. Yes.
Q. And trial testimony?
A. Being in trial?
Q. Yeah. If you were testifying in an actual trial, is your rate different or the same?
A. Usually, if I go to trial and I have to fly there, it's $5,000 for the entire day.
Q. Can you approximate for me, since December 5, approximately how many hours you've worked on the Hardeman case?
A. I do have them somewhere in my computer, maybe add another 10 to 12.
Q. Okay. So approximately 50 to 55 hours; is that fair?
A. Fair.

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Q. Do you have -- have you submitted an invoice for all of the work that you did relating to your -- the general causation opinions in the MDL back in 2017?
MS. WAGSTAFF: Object to form.
THE WITNESS: Yes, I have. I have not submitted anything since August of 2018, but everything else in '017, yes, a while back.
BY MR. STEKLOFF:
Q. Sitting here -- and I'll take any approximation. Can you proximate for me, if you consider all of the work you've done in this litigation, including the Johnson case, how many hours you spent or how much money you've been paid?
MS. WAGSTAFF: Objection. If you know.
THE WITNESS: I'm not sure I know. I mean, I'll have to go back to the records. I'm sure I've been paid less than all of the lawyers, but I'm not really sure how many hours I spent. I'll have to go back and work. I mean, you should have these records because everything is submitted to all of the law firms.
MR. STEKLOFF: Okay. I just want to make sure we have all of his invoices throughout the entire litigation and if we don't, I'm asking for those

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invoices.
MS. WAGSTAFF: I mean, every time you've deposed him, we've produced invoices. So you would just need to add them up.
MR. STEKLOFF: Okay. This is not a dispute. I just want to make sure -- and maybe we'll email. I just want to -- I will see all the invoices that we have from the various depositions, and then I'll ask if you can double-check them. And if we haven't received any, I think we are entitled to them, and I'd ask that we receive them.
MS. WAGSTAFF: Okay. We can talk about it later.
BY MR. STEKLOFF:
Q. Is it -- are you able to approximate, Dr. Nabhan -- well, first of all, when were you retained in the litigation, approximately, if you recall?
A. I was asked to look at the literature just generally on Roundup and glyphosate back in the spring of 2016, somewhere around that, and I requested some time just to go through literature and actually to look through everything that was by the Miller firm out east. And it took me several months to look at the literature, review a lot of

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the data before saying that this is very convincing, and I'm more than happy to help on this case.
Q. And in the approximately two and a half years that you've been working as an expert for the plaintiffs, can you approximate how much of your total income has been received from your work in the litigation as a percentage?
A. That's actually a good exercise for me to do on a personal level. I did not think about it, and I don't know the answer to that. Do I guess? Do I just throw a number?
MS. WAGSTAFF: No, don't guess. If you don't know the answer, you don't know the answer.
THE WITNESS: I mean, I don't want to say something that is not accurate. I really can't tell in terms of percentage, but this is the only litigation work I've ever done. So I don't know. It will be a guess, and if counsel says not to guess, I don't think I'm going to guess.
BY MR. STEKLOFF:
Q. We don't want you to guess. You can't give me an educated estimate, even approximate percentage-wise?
MS. WAGSTAFF: Objection. He said he doesn't

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know.
THE WITNESS: What does that mean now?
BY MR. STEKLOFF:
Q. If you can -- I don't want you to guess out of thin air, but if you can, based on -- take your time. If you can approximate -- and I'm not saying it needs to be an exact number -- but approximate, I would ask that you do that.
A. Less than 20 percent.
Q. I'm not going to ask the names, but have you reviewed any cases of individual plaintiffs where you have determined that Roundup was not a substantial contributing factor into his or her development of NHL?
THE WITNESS: Is that privileged?
MS. WAGSTAFF: You can --
MR. STEKLOFF: I'm looking for a yes-or-no answer.
THE WITNESS: Yes, I have.
BY MR. STEKLOFF:
Q. I want to ask you about [redacted]
A. Sure.
Q. You probably knew that would be a topic of today's deposition.
A. It should be.

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Q. Actually, before I do that --
A. Turn to a page or something or no?
Q. Just in a moment.
What did you do to prepare for this deposition?
And I'm not asking about any specific conversations you had with counsel.
A. [redacted]. I reviewed my own report, as well as the literature that I have relied on, and as I told you, I was able to look at the reports of your experts from Mr. Hardeman's case. And I also reviewed some of the references that they relied on at a high level.
Q. Did you meet with counsel?
A. We met yesterday, yes.
Q. Who was part of that meeting?
A. Counsel Greenwald, Forgie, and Wagstaff.
Q. Was anyone on the phone?
A. No.

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Q. Have you ever met Dr. Weisenburger?
A. I've never met him personally, but I've heard him speak. I'm sure he's heard me speak at national conferences.
Q. You've never discussed this litigation with him?
A. No.
Q. Have you reviewed his report in the Hardeman case?
A. I have.
Q. Do you have any criticisms of his report?
A. No.
Q. Have you reviewed -- have you ever met Dr. Shustov?
A. I have.
Q. Have you ever discussed the litigation with Dr. Shustov?
A. I have not.
Q. In what context have you met Dr. Shustov?
A. Only from what people know each other. So I met him -- I actually even moderated a webinar with him a couple of years ago. We did a Webex for oncologists as two experts discussing T-cell lymphoma at the time, but we never talked about this litigation at all or any litigation for that

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matter.
Q. Did you review his report in Mr. Hardeman's case?
A. I have.
Q. Do you have any criticisms of his report?
A. No.
Q. But you never discussed his report with him?
A. No.
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BY MR. STEKLOFF:

Q. Well, there are patients who have diffuse large B-cell lymphoma that -- where the latency has taken 10 years to develop; correct?

A. You're talking after being exposed to a particular pathogen?

Q. Or idiopathic.

There are patients that develop diffuse large B-cell lymphoma where the latency period is even 20 years; correct?

A. So I want to make sure we are saying the same thing. Define "latency" for me. Because you

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just said two different things. You know, are you saying latency from the time being exposed to a particular pathogen or an offending agent to the development of clinical disease?

Q. I understand.

A. That would never be 10 years in large-cell lymphoma.

Q. In diffuse large B-cell lymphoma, is it possible to have -- for it to take -- what is the longest it could take from the development -- forget about exposure -- from the development of the first cell to a clinically recognizable tumor that can be identified?

MS. WAGSTAFF: Object to the form.

BY MR. STEKLOFF:

Q. Do you understand the question?

A. I actually don't understand the question. But let me just make sure --

Q. I'll ask a better question, if you don't understand.

A. Sure.

[redacted]

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[redacted]

Q. I understand why I confused you about the latency in terms of exposure to a substance or item and then when it develops. I think you just answered my question.

You think that approximately -- I'm not going to hold you to this exact time frame -- that from the first cell of a diffuse large B-cell lymphoma until it becomes -- to the extent that it can be diagnosed, it takes approximately six months, if you're talking about diffuse large B-cell lymphoma?

A. But that's not the time from the initial

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mutation that may be undetected. I mean patients can have some genetic damage in their body that goes undetected first; right? I mean, it just happens. And then they start developing the clinical disease at the very microscopic level before it becomes detected.

So I think, you know, when you talk about latency, either you are talking latency from the time of being exposed to an offending agent, to the first type of mutation that does not get detected at all or latency from the time you get exposed to something until you have clinically overt disease, like lymph node or something you can examine.

Q. Now we are getting on the same page. I want to focus on the former, which is the genetic mutation.

A. I see.

That we cannot detect clinically.

Q. Correct.

It's in the body, but no one can see it. A pathologist cannot see it. There is no tumor. There is nothing to see. That's what I want to focus on is that in these questions. Okay?

A. Okay.

Q. So what is the length of time with diffuse

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large B-cell lymphoma generally that that first genetic mutation can occur up until the time that it becomes clinically diagnosed -- you can clinically diagnose it?

A. But you just went back to the clinical diagnosis. You just said -- you just said we are not going to talk about the clinical overt diagnosis, I thought.

Q. So assume the clinical --

A. Again, the -- in this type of lymphoma that is an aggressive form of lymphoma, you go -- when you go retroactively, if you have somebody who has this type of lymphoma -- for different types of lymphomas, you can go for several years, the indolent ones, but for this type of lymphoma, the large-cell lymphoma, if you're diagnosing it sometime in the beginning of 2015, really, the best you can tell, as a clinician, because of how aggressive this disease is, that maybe the lymphoma existed for a couple of months before, and now we are diagnosing it, which is exactly what he went through.

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MR. STEKLOFF: Can we go off the record?
MS. WAGSTAFF: Sure.
THE VIDEOGRAPHER: We are off the record at 9:41 a.m.
(A short break was taken.)
THE VIDEOGRAPHER: We are back on the record at 9:56 a.m.
BY MR. STEKLOFF:
Q. Dr. Nabhan, I wanted to discuss your methodology with you for a few moments.
A. Sure.
Q. So I saw recently you were deposed in a case called the Gordon case. Do you recall that?

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A. I do.
Q. And understanding that the individual circumstances and medical history and medical records are completely different, was your methodology the same in that case as it is here in Mr. Hardeman's case?
A. Yes, it is.
MS. WAGSTAFF: Object to form.
BY MR. STEKLOFF:
Q. So any questions in that deposition that you were asked about your methodology, as a general matter, would apply here; is that fair?
A. Right.
So essentially what is important any time you are dealing with a disease such as non-Hodgkin lymphoma and you are looking at causation is to look at all of the factors and be very inclusive in investigating all potential contributing factors to this disease, and then you really have to weigh these factors and apply them in every specific case and make a determination whether one of these factors contributed -- more than one of these factors contributed or none of these factors contributed, and when none of the factors contribute, that's what we call "idiopathic."

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And I think it's important to mention that, because in the Johnson case, the defense counsel said I never really mentioned anything about idiopathic. Well, idiopathic, by default, you actually don't know what the cause is. So all that we're talking here about is potential known factors, and we look at all of them, be very inclusive and then do the process of elimination, call it a differential diagnosis, call it differential etiology, whatever you want to call, but then you start looking at all of the causes and try to eliminate the ones that don't stand the rigors -- the test of rigor.
Q. Do you agree there is a difference between a "risk" and a "cause"?
A. Well, I mean, not every risk factor is going to cause a disease. There is a difference between a "risk" and a "cause." Some risk factors cause the disease, and some of them don't.
Q. And when talking just about risk factors, have you ever heard the phrase "causative risk factor" as opposed to "non-causative risk factor"?
A. From a clinical standpoint, there are many -- there are risk factors that are inherent and known for a particular disease, and in each

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individual case you have to determine whether these risk factors were causative to the development of this disease versus not. So that's really the best of my ability in answering your question. I believe it did.
Q. Yeah. And my question is a little different.
When you're looking at -- when you're trying to identify the risk factors that you must consider, do you ever distinguish between -- things that are potential causative risk factors as compared to potential non-causative risk factors?
A. I am very inclusive. I have to put all of the risk factors in. You have to look at all of the risk factors that a patient can possibly have, and then you do the process of elimination. Like I said, some of these risk factors will not end up contributing to the actual disease, and some of them end up possibly contributing to the disease. So you really have to look at every single particular risk factor that a specific patient has and anytime you're looking at causation for any disease, not just lymphoma, and obviously, this applies for lymphoma as well.
Q. But you don't group them as causative --

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when they are all included, you don't group them as causative risk factors or non-causative risk factors, correct?

A. [redacted]

Q. So if another doctor, not you, as part of a differential etiology said that certain risk factors are causative risk factors and can be considered differently than non-causative risk factors, you would disagree with that methodology; is that fair?

MS. WAGSTAFF: Object to form.

THE WITNESS: No, I would not disagree. It's

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just semantics how you define it. Like I said, we are probably both saying the same thing. That particular physician may want to group the risk factors as causative versus not. I prefer to put all of them as potentially contributing to the disease. So I want to look at all of the risk factors. I don't want to dismiss even the ones you may look at as non-causative.

That particular physician may say that's not causative, so I'm not going to look at them critically. I prefer to look at all of the risk factors critically, all of them, and not dismiss any of them and then look at each one individually and how they apply to this particular case. My methodology and my opinion is way more inclusive than separating the causative, non-causative and then dismissing non-causative entirely. I don't like to dismiss any of these risk factors. I look at each one.

BY MR. STEKLOFF:

Q. [redacted]

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[redacted]

Page 65

[redacted]

Page 66

Page 68

Page 67

Page 69

Page 70

[redacted]
?

Page 71

[redacted]

Page 72

Q. A rabbit hole not worth going down.
So you said you reviewed IARC, you mentioned, 100. Did you review the IARC monograph on that that related to other types of cancers and then the more recent one, which is I think 100B relating to non-Hodgkin lymphoma?
A. I just reviewed the recent one, I believe. I don't think I reviewed more than one.
Q. And --
[redacted]

Page 73

[redacted]

Page 74

[redacted]

Page 76

[redacted]

[redacted]

Page 77

[redacted]

Q. And I think you actually cite the SEER database at another point in your report: I can probably find the reference.

A. Just to clarify, this is not inclusive of everything I looked at. I provide just the examples because I didn't think I should put 50 or 60 references in the report, but I'll do that with my next report.

Q. I'm not crit- -- I just wanted to know.

A. Just your experts had, like, 70 references, which I could have easily done. I just thought I don't need to bombard people with so many references saying the same thing, but, you know, again, that's why I provide an example because I want to make sure it's clear this is a sample of the references relied on.

Q. You also cite to your data, just so you

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can see, on page 5 in the middle of the first full bullet.
A. One second. In the BMI bullet?
Q. Yes.
A. Yes.
Q. And so is it fair to say that you find SEER data reliable?
A. I think it has limitations because you are not talking all the United States. As you know, I think it's probably 9 or 11 states. I forgot exactly on a percent. Depending on what you're looking at, I think it's very valuable depending on what you're looking at. It is missing a lot of details.
I actually published a lot of -- my papers used SEER data when I was looking at specific disparities in care between men, women, older, younger in patients with lymphoma, I used SEER database. But it has a lot of limitations. So I would say it depends on your objectives. It could be very valuable depending what you're looking at.
Q. But you've cited it in peer-reviewed published literature before that?
A. And I've used it in my own research as

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well. Again, it depends what you're looking at.
Q. It certainly can give you a lot of information about the incidence rate of NHL in the United States; correct?
A. I mean, yeah, but I don't think that is -- I mean, I don't use SEER for the incidents. I believe it gives you more than just the incidence. The incidence probably can be used -- you can get that from different than SEER.
Q. Okay. I think I know the answer, but I'll ask.
[redacted]
?
A. [redacted]

Page 80

[redacted]
MS. WAGSTAFF: I thought we already covered this.
BY MR. STEKLOFF:
Q. I'll restate the question just so it's clear on the record.
[redacted]

Page 81

[redacted]
you.
[redacted]

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11

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[redacted]

Page 96

[redacted]

Page 95

[redacted]

Page 97

[redacted]

13 Q. Everything else is exactly the same.

[redacted]

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Page 100

hours a day" --

MS. WAGSTAFF: Same question or different hypothetical?

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Page 102

[redacted]

Page 104

[redacted]

Page 105

[redacted]

A. Yes.
Q. And I am now done with the exposure bullet, and I want to move to the next bullet. You previously offered a report on general causation; correct?
A. I did.
Q. And I -- just now I understand the answer to this, but I'm just trying to get us on the same page. You also have read Judge Chhabria's opinion about -- the general causation Daubert opinion; correct?
A. I mean, a while back. This was when he provided the opinion. That was, I think, six or seven months since I read it. I haven't read it for this case.
Q. And here I just want to try to understand what you're doing. In applying your differential diagnosis, tell me if this is a fair characterization: Was it necessary -- did you feel like it was necessary to provide your general causation views of glyphosate or Roundup as a possible risk factor before you could rule it in or rule it out?
A. So I wasn't providing general causation here. I wasn't providing general causation at all.

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What I was trying to explain -- and that's why these bullet points are sequential to each other.

[redacted]

ever.

MS. WAGSTAFF: I am going to object to questioning him about the demarcation between general causation and specific causation. That is a legal issue that is specific to the MDL, and it's specific to Judge Chhabria's opinion. And to expect a medical doctor to know and be able to understand a 70-page legal an opinion that even we probably wouldn't agree on, I think, is unfair and inappropriate.

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BY MR. STEKLOFF:

Q. I just wanted to go through the bullets to try to understand.

A. Sure.

Q. Your first bullet is about IARC's finding of --

A. Page 6, right?

Q. Page 6, yes, sir.

And starting in March 2015, starting with that bullet.

A. Sure.

Q. That bullet is just identifying that IARC found glyphosate to be a probable human carcinogen, Class 2A; correct?

A. Correct.

Q. That was also something that you relied on in your general causation report?

A. I'm not sure I could say "general causation," but, yes.

Q. In your 2017 report?

A. Yes.

But, again, I want to make sure that you understand why I have it here. This is -- I'm not giving any general causation opinion here. I'm providing an opinion in Mr. Hardeman's case, but in

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order for me to explain how Roundup, in his particular case caused, non-Hodgkin lymphoma, I need to explain where I got this from, what type of epidemiologic literature that links that to this but I'm not providing an opinion in general causation. I just hope this is clear.

Q. It is clear. Actually -- that answer is almost exactly what I wanted, so I think we can end.

MS. WAGSTAFF: No. My objection is because I think that you're trying to set up an argument that I've been having with you and Ms. Yates. And to be very clear, and I think what Judge Chhabria has said on the record, which is why I objected earlier to you asking him legal questions, is that specific causation experts cannot give new or general causation opinions. And it's our belief and it's our opinion that Monsanto specific causation opinions are giving new and different general causation opinions.

We said at the very beginning of this case or of this deposition that Dr. Nabhan is giving only specific causation opinions, and to the extent he's giving general causation opinions, they are consistent what has been allowed for plaintiffs to

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opine on at Daubert. And I believe that's what he said at the last status conference, and we can leave it at that.

MR. STEKLOFF: Okay. I'll save my response for later if we have to go down that road.

MS. WAGSTAFF: You can give it now.

MR. STEKLOFF: I don't need to.

MS. WAGSTAFF: Okay. And, by the way, when I say "consistent with what has been allowed for plaintiff to opine on," I mean all plaintiffs, all MDL plaintiffs.

MR. STEKLOFF: Actually, can we go off the record?

THE VIDEOGRAPHER: We are off the record at 10:53 a.m.

(A short break was taken.)

THE VIDEOGRAPHER: We are back on the record at 11:07 a.m.

BY MR. STEKLOFF:

Q. I think I just have two more topics, Dr. Nabhan.

[redacted]

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Q. [redacted].
Q. [redacted]
Q. [redacted]
a?
[redacted]m

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[redacted]

Page 112

[redacted]
Q. [redacted]

Page 113

[redacted]

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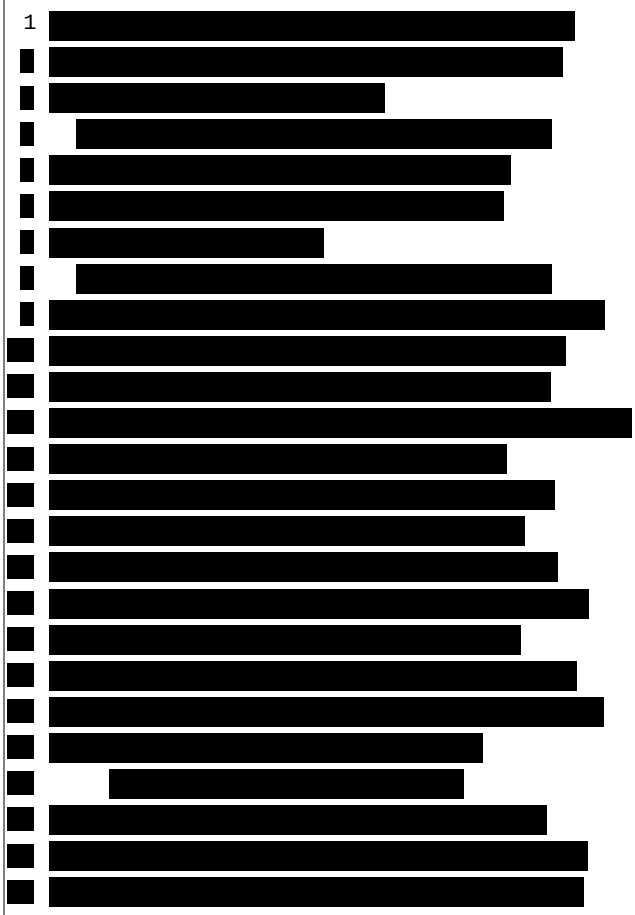

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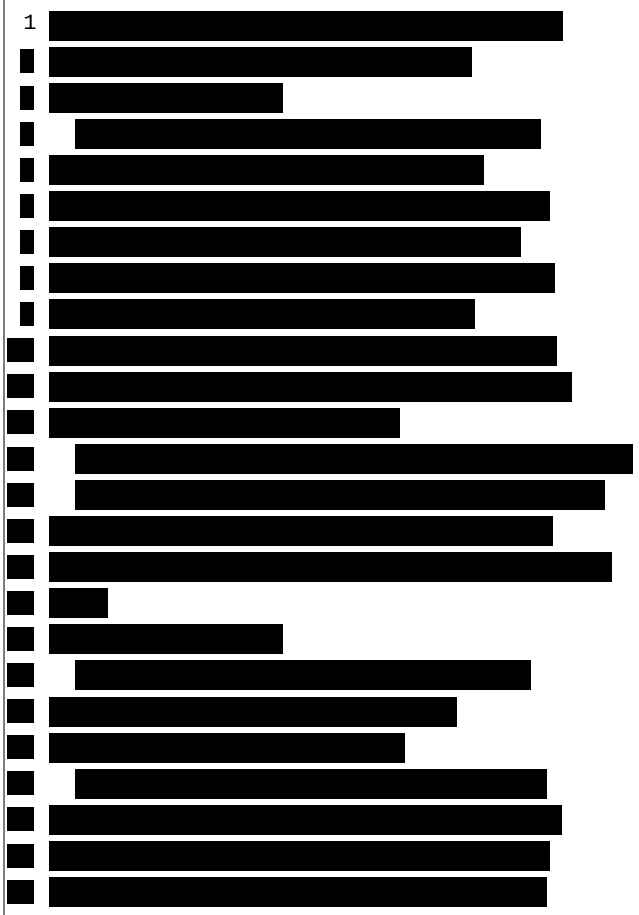

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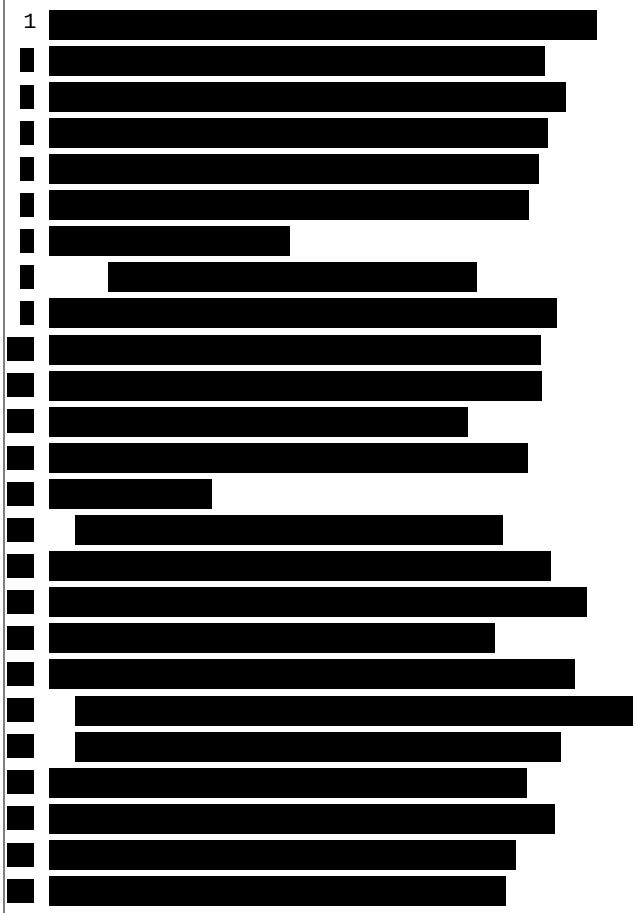

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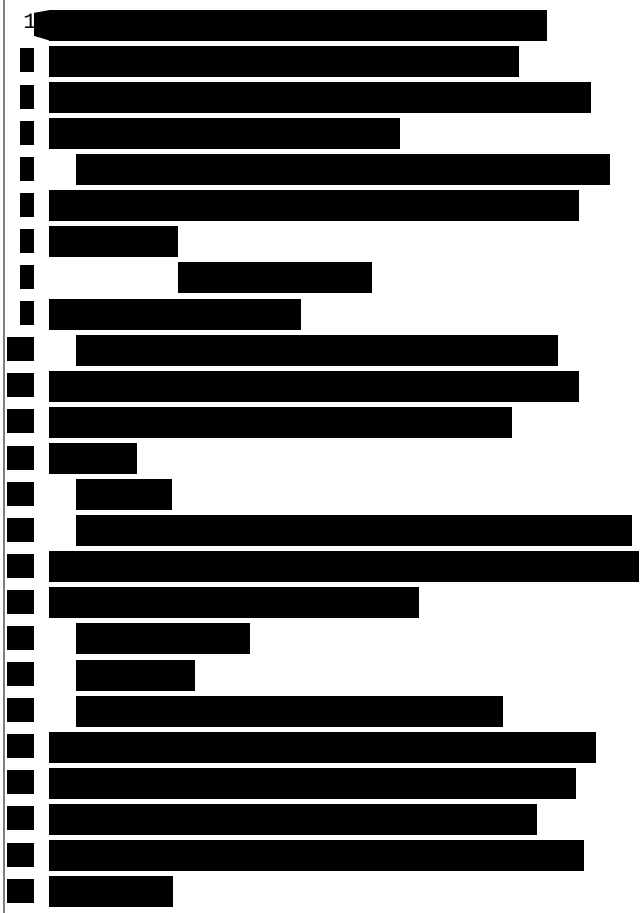

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[redacted]

MS. WAGSTAFF: Okay. No further questions.

FURTHER EXAMINATION

BY MR. STEKLOFF:

Q. [redacted]

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[redacted]

Page 124

[redacted]

Q. You, in your practice, when you were

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treating patients, you wanted to know if there was a causative factor a specific disease that you were taking care of a patient for, didn't you?

A. I was a lymphoma specialist, and I'm a lymphoma specialist. And I think there are many general oncologists that may have not the expertise of lymphoma. I think very different. I was seeing lymphomas. I saw thousands of patients with lymphoma.

[redacted]

Q. To answer my question, I didn't ask you a single thing about his treaters right there. Can you answer my question? You, in your practice when you were treating patients, you wanted to know if there was a causative fact for a lymphoma you were taking care of a patient for; correct?

A. I did ask the appropriate questions to see if I could illustrate a causative factor or not.

Q. If you could find the cause, you would have wanted to know the cause when you were treating patients?

A. Absolutely.
MS. WAGSTAFF: I may have one more question. Can we take a break, please?
THE VIDEOGRAPHER: We are off the record at 11:25 a.m.
(Brief interruption.)
THE VIDEOGRAPHER: We are back on the record at 11:26 a.m.
MS. WAGSTAFF: No more questions.
THE VIDEOGRAPHER: We are off the record at 11:26 a.m. This concludes the videotaped deposition of Chadi Nabhan MD, MBA.

C E R T I F I C A T E

I, DEANNA AMORE, a Shorthand Reporter and notary public, within and for the State of Illinois, County of DuPage, do hereby certify:

That CHADI NABHAN, M.D., the witness whose examination is hereinbefore set forth, was first duly sworn by me and that this transcript of said testimony is a true record of the testimony given by said witness.

I further certify that I am not related to any of the parties to this action by blood or marriage, and that I am in no way interested in the outcome of this matter.

IN WITNESS WHEREOF, I have hereunto set my hand this 14th day of December 2018.

____
Deanna M. Amore, CSR, RPR

UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
IN RE: ROUNDUP PRODUCTS MDL No. 2741
LIABILITY LITIGATION
_______________________ Case No. 16-md-2741-VC
This document relates
to:
Hardeman v Monsanto Co., et al.
Case No. 3:16-cv-00525

DECLARATION UNDER PENALTY OF PERJURY

I declare under penalty of perjury that I have read the entire transcript of my deposition taken in the above-captioned matter or the same has been read to me and the same is true and accurate, save and except for changes and/or corrections, if any, as indicated by me on the DEPOSITION ERRATA SHEET hereof, with the understanding that I offer these changes as if still under oath.

Signed on the ______ day of
______________, 20__.
____
CHADI NABHAN, M.D.

ERRATA SHEET
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