

UNITED STATES  
COURT OF FEDERAL CLAIMS

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IN RE: CLAIMS FOR VACCINE )  
INJURIES RESULTING IN )  
AUTISM SPECTRUM DISORDER, OR )  
A SIMILAR NEURODEVELOPMENTAL )  
DISORDER, )

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FRED AND MYLINDA KING, )  
PARENTS OF JORDAN KING, A )  
MINOR, )

Petitioners, )

v. )

SECRETARY OF HEALTH AND )  
HUMAN SERVICES, )

Respondent. )

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GEORGE AND VICTORIA MEAD, )  
PARENTS OF WILLIAM P. MEAN, )  
A MINOR, )

Petitioners, )

v. )

SECRETARY OF HEALTH AND )  
HUMAN SERVICES, )

Respondent. )

Docket No.: 03-584V

Docket No.: 03-215V

Pages: 1121 through 1383/1455

Place: Washington, D.C.

Date: May 15, 2008

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IN THE UNITED STATES COURT OF FEDERAL CLAIMS  
OFFICE OF SPECIAL MASTERS

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SECRETARY OF HEALTH AND )  
HUMAN SERVICES, )

Respondent. )

Courtroom 402  
National Courts Building  
717 Madison Place NW  
Washington, D.C.

Thursday,  
May 15, 2008

The parties met, pursuant to adjournment, at  
9:00 a.m.

1122

BEFORE: HONORABLE GEORGE L. HASTINGS, JR.  
HONORABLE PATRICIA E. CAMPBELL-SMITH  
HONORABLE DENISE VOWELL  
Special Masters

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C O N T E N T S

<u>WITNESSES:</u>	<u>DIRECT</u>	<u>CROSS</u>	<u>REDIRECT</u>	<u>RECROSS</u>	<u>VOIR DIRE</u>
<u>For the Petitioners:</u>					
MyLinda King	1130	1174	--	--	--
Elizabeth Mumper	1187	1343	--	--	--
	1298				
MyLinda King (Recalled.)	--	--	1340	--	--

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P R O C E E D I N G S

(9:00 a.m.)

SPECIAL MASTER HASTINGS: Good morning, folks. Please be seated.

For those at home, this is Special Master Hastings who will be presiding over the proceedings today. As I noted earlier, we are the three Special Masters, we will be taking turns at presiding over the proceedings over the general causation testimony.

Let me start by noting that, as you see, Special Master Vowell is not with us at this time. She will join us later this morning. She is attending a funeral this morning, but she will be here later this morning, or will certainly be here by the time we start the testimony of Dr. Mumper.

Another matter that I would like to take up is to basically repeat some comments that I made on Monday morning, and these are addressed to the family members of Jordan King and William Mead.

Of course, Monday morning, when we started the proceedings, I made certain comments based on behalf of all three of the Special Masters to the family members. At that point, of course, William Mead's mother was here and some members of her support group, but Mrs. King was not here yet, Mr. George Mead

1 and some of the other folks that have arrived since  
2 Monday morning weren't here. So I think I will repeat  
3 those comments for their benefit, and basically they  
4 are this.

5 First, we simply want to welcome you folks  
6 and thank you very much for coming all the way from  
7 the Portland area, most of you, to be here with us.  
8 We greatly appreciate it.

9 Second, we wanted to say that while we  
10 haven't had the opportunity to meet Jordan or William,  
11 we certainly have met a number of other autistic  
12 children, and we have read very, very carefully the  
13 records of Jordan's case and William's case, and even  
14 from the cold medical records we can get a sense, and  
15 as we did from George Mead's very poignant testimony  
16 yesterday, of what it's like to be raising an autistic  
17 child, and the difficulties the families have come  
18 through, and we wanted to extend our sympathy to the  
19 family members, but also to go beyond that, and say  
20 that it's also obvious from those records that, as it  
21 was from Mr. Mead's testimony yesterday, what an  
22 admirable job these families have done along with so  
23 many other families of autistic children in working  
24 hard to overcome those difficulties, to make the best  
25 of the situation, to work with those children and to

1 bring them along at the best way possible.

2 That certainly comes through very clear in  
3 the records of these two children, and we certainly  
4 state our admiration for the way the families have  
5 coped with this situation.

6 And lastly is that, of course, we want to  
7 thank you folks for not only being here but for  
8 allowing your sons' cases to be included as test cases  
9 in the Omnibus Autism Proceeding. These are very,  
10 very difficult issues that we have to wrestle with,  
11 and we need to do that in the context of individual  
12 cases, and we greatly appreciate your allowing your  
13 cases to be included here as test cases.

14 So I just want to again thank all of you  
15 folks very much for being here and being a part of  
16 this proceeding.

17 Also, in regard to that same note, I will  
18 just again explain for the benefit of both people  
19 listening at home and people here emphasize that what  
20 we are doing here the difference between general  
21 causation and specific causation, and relating to what  
22 Special Masters we have here; that again we have  
23 individual cases is what the program is designed to,  
24 the Vaccine Act is designed to resolve. We have to  
25 decide individual cases, is Jordan King's symptoms

1 caused by vaccines, are William Mead's symptoms caused  
2 by vaccines, and each of the other children involved.  
3 We have to resolve individual cases.

4 But because after discussion with counsel  
5 for both sides, all agreed that some kind of  
6 proceedings rather than hear all these many expert  
7 witnesses 5,000 different times, it makes better sense  
8 to group the witnesses, take them at one time, and get  
9 as much out of it as we can from those witnesses, the  
10 expert witnesses, and then apply it to individual  
11 cases.

12 So this is a combination proceeding. When  
13 we're taking the general causation testimony, such as  
14 Dr. Deth, Dr. Aposhian, all the witnesses we have  
15 heard so far this week, all the expert witnesses for  
16 both sides, all three of us will be analyzing that  
17 testimony and applying it to individual cases.

18 Then when it comes to resolving individual  
19 cases, however, there will be one Special Master for  
20 one case, and as I noted on Monday, the Jordan King  
21 case is assigned to me. The William Mead case is  
22 assigned to Special Master Campbell-Smith, and a third  
23 case dropped out at the last minute that was assigned  
24 to Special Master Vowell, but a third case is being  
25 selected, and she will apply the general causation



1 testimony taken during this hearing, she will apply  
2 that to a third case.

3 So I emphasize that while you will see  
4 different Special Masters presiding during the general  
5 causation testimony, but when it comes to the  
6 individual cases, you noted yesterday that during the  
7 testimony of George Mead about his son William,  
8 Special Master Campbell-Smith, who is the Special  
9 Master assigned to that case, she presided over that,  
10 just as when Mrs. King testifies this morning, I will  
11 preside over that since her son's case is assigned to  
12 me, and so I wanted to just emphasize for everyone's  
13 benefit that we're taking both general causation  
14 testimony and testimony that applies to individual  
15 cases, and that's why today during Dr. Mumper's  
16 testimony, even if she talks specifically about the  
17 two different cases, we may switch in the middle of  
18 her testimony as to actually who is presiding just to  
19 emphasize the fact that each of us, when it comes to  
20 deciding individual cases, each of us is deciding the  
21 case that's assigned to him or her.

22 So with that, that's all the preliminaries  
23 that I have for t his morning. Anything from either  
24 counsel that we can do on the record before we do Mrs.  
25 King's testimony?

1 MR. POWERS: Not from Petitioners, Special  
2 Master, except that speaking on behalf our clients we  
3 appreciate the comments you made earlier today and on  
4 Monday.

5 SPECIAL MASTER HASTINGS: Thank you.

6 MR. MATANOSKI: Nothing from the government.

7 SPECIAL MASTER HASTINGS: All right. Do you  
8 want to call Ms. King at this point?

9 MR. POWERS: Yes, Special Master.  
10 Petitioners are ready to call MyLinda King.

11 SPECIAL MASTER HASTINGS: Please take the  
12 stand, Ms. King. Please have a seat, ma'am, and if  
13 you could raise your right hand for me, please.

14 Whereupon,

15 MYLINDA KING

16 having been duly sworn, was called as a  
17 witness and was examined and testified as follows:

18 SPECIAL MASTER HASTINGS: Thank you, Ms.  
19 King, and let me again say thank you for being here  
20 and I know that this kind of testimony will not be an  
21 easy thing. You take your time and get a drink. If  
22 you need a delay, let us know, but we hope to get  
23 through this with as little emotional pain to you as  
24 possible, but we do thank you for being here and being  
25 with us.

KING - DIRECT

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1 Mr. Powers, go ahead.

2 MR. POWERS: Thank you.

3 DIRECT EXAMINATION

4 BY MR. POWERS:

5 Q Good morning, Mrs. King.

6 A Good morning.

7 Q As you know, we need to make a nice clean  
8 record, so I would like you to spell your name so that  
9 the court reporter can get it onto the record.

10 A It's M-Y, capital L-I-N-D-A, all one word,  
11 last name king, K-I-N-G.

12 Q Ms. King, where do you live?

13 A In Portland, Oregon.

14 Q Who do you live with?

15 A My husband and my two children, Jordan and  
16 Maya.

17 Q And what's your husband's name?

18 A Frederick.

19 Q Does he go by Fred?

20 A He does.

21 Q So anywhere where we see Fred King in the  
22 medical records or in the charts, that's referring to  
23 your husband?

24 A Yes, it is.

25 Q Is Maya younger or older than Jordan?

KING - DIRECT

1131

1 A Maya is 15 months younger than Jordan.

2 Q What do you do for a living?

3 A I'm primarily a stay-at-home mom, and I also  
4 teach music in the public schools, and a little bit  
5 privately.

6 Q What sort of music do you teach?

7 A I happen to fall into African style marimba.  
8 My husband and I met playing in an African marimba  
9 band, and that's how I got to learn that music, so  
10 that's what I teach in the Portland public schools,  
11 African marimba.

12 Q What sort of work does your husband Fred do?

13 A He is an auditor for Metro, Metro Regional  
14 Services, which is a government agency in Portland.

15 Q Now, we're going to focus obviously on  
16 Jordan's life, and unfortunately a lot of his medical  
17 history, but before even delving into the strictly  
18 medical issues, I would like you to describe for the  
19 Special Masters Jordan's birth and very early  
20 childhood, and if you can confine it to really the  
21 first couple of months of life, from when he was born  
22 to the first couple of months of progress, if you  
23 could explain that history to the Special Masters  
24 here.

25 A Well, Jordan was born full term. I think he

KING - DIRECT

1132

1 was one or two days ahead of the due date. Born  
2 healthy. We felt very lucky, happy to have such a  
3 wonderful little boy.

4 Q And let me just interrupt you. In terms of  
5 his birth, you said he was healthy. Were there any  
6 difficulties or complications with the labor or birth  
7 from either his end or your end?

8 A He was born with the assist of a vacuum, I  
9 forget what they call it, but I had a little trouble  
10 at the last stage, and they helped me with a vacuum  
11 suction, and I think he scored 8 on an Apgar. I had a  
12 low-grade fever. They gave me some antibiotics.  
13 Nobody seemed concerned about it. They said that was  
14 a common thing, and actually, it was a long birth. I  
15 think it was 22 hours, but it seemed to go pretty  
16 well.

17 Q And then in terms of your pregnancy leading  
18 up to that, is it a pregnancy you would describe as  
19 uneventful?

20 A Yes. I got a little queazy in the third  
21 month and it passed very quickly. I don't remember  
22 having huge problems with swelling and all these  
23 pregnancy complaints. I was still very active. I  
24 think I got sick around the fourth month of pregnancy.  
25 It might have been food poisoning. I was vomiting for

KING - DIRECT

1133

1 a couple of days, and it just got better. Other than  
2 that all of my visits to the doctor, you know,  
3 everything was going fine. She never gave me any  
4 comments to lead me otherwise.

5 We had one or maybe two ultrasounds done.  
6 Everything looked fine.

7 Q And during your pregnancy, do you smoke  
8 cigarettes or drink alcohol?

9 A Oh, no, no. I bought pre-natal vitamins,  
10 the expensive kind, and I've never smoked, and I  
11 definitely avoided all those things that pregnant  
12 mothers are supposed to avoid.

13 Q Do you have any dental amalgams, or more  
14 specifically, at the time that you were carrying  
15 Jordan to term did you have any dental amalgams?

16 A I've only got one or two.

17 Q So sorry I interrupted you and went back in  
18 time. Now I want to go back forward to where you were  
19 describing after Jordan was born. If you could pick  
20 up your description again for the Special Masters his  
21 general health and well being after he was born.

22 A For the first two months?

23 Q First couple of months, let's say, yes.

24 A Okay. Pretty uneventful. We were noticing  
25 how alert he was, seemed to have eye contact very

KING - DIRECT

1134

1 early on. We took him to Florida, which is where I'm  
2 from and almost all of my family is there, we took him  
3 for Christmas so he would have been about three months  
4 old, and everybody was just giving me all sorts of  
5 compliments about what an alert, sparkley little guy  
6 he was.

7 I remember that while we were in Florida he  
8 was raising his head up and everybody was saying, oh,  
9 that's really great, he's a strong boy, and he  
10 actually did rollover once in Florida on my father's  
11 bed because he lifted his head and just sort of rolled  
12 all the way over, and everybody told me, oh, how great  
13 that was. Just nothing to really speak of other than  
14 just a happy, little boy.

15 Q In those first couple of months, you had a  
16 well-baby visit, and he received immunizations at that  
17 point as best as you would recollect, correct?

18 A I think a two-month visit he got whatever  
19 round of shots were back then the norm.

20 Q All right. And then obviously both the  
21 Respondent's lawyers and the Court here have the  
22 medical records, but it's your recollection that he  
23 received a full round of recommended pediatric  
24 vaccines?

25 A Yes.

KING - DIRECT

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1 Q He received them on schedule?

2 A Yes.

3 Q Was there ever a time that he went into the  
4 doctor's office for immunizations where any doctor  
5 said skip a shot or don't get a shot at this point?

6 A I don't believe so.

7 Q Now, moving ahead after the first couple of  
8 months, go ahead, let's just describe Jordan's  
9 progress.

10 A Well, he seemed to be physically very  
11 strong. We noticed that he could pull himself up  
12 before he could crawl. I think he crawled at around  
13 seven months, but before that he did a lot of  
14 creeping, which I now understand they call scooting,  
15 was able to get around quite well with this scooting.

16 One thing that really stands out is how much  
17 he laughed. He just had a break belly laugh and  
18 seemed to really enjoy physical humor and silliness  
19 and smiled reciprocally, babbled. We had -- I think  
20 we had this parrot that when you turn it on it repeats  
21 back to you whatever you say, only three times in a  
22 row and at a slightly higher pitch, and he seemed to  
23 think that that was quite a lot of fun to have  
24 conversations with in his little baby babbling way.

25 He was very imitative, and we noticed pretty



KING - DIRECT

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1 early on that he liked to draw with a Magna Doodle,  
2 which is a children's toy that is kind of like an  
3 Etch-A-Sketch, only with a pen, and he started to  
4 spend a lot of time drawing. He liked to look at  
5 books, and one of our really fun things that we would  
6 do is I would lay sitting up in a bed and putting him  
7 in my lap, and he would hold the book and I would read  
8 it to him, and then I would say, turn the page, and he  
9 would actually -- it was a board book, and he would  
10 turn the page, and the I would read, and that was one  
11 thing that I remember doing with him a lot.

12 Q And do you recall about how old he was when  
13 he was turning pages of books?

14 A It was pretty early. I would say somewhere  
15 six-seven months he was able to do that.

16 Q You also described the Magna Doodle and it  
17 has a pen.

18 A Right.

19 Q The Etch-A-Sketch, having children myself,  
20 you could tell the difference in the toys, the Etch-A-  
21 Sketch has the knobs.

22 A Knobs, right.

23 A And the Magna Doodle has a magnetic pen.

24 A Right.

25 Q Did he sort of grab it with his fist or did

KING - DIRECT

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1 he hold it like a pen? How did he work that?

2 A Well, very early on he just grabbed it in  
3 his fist, and he very early on learned how much fun he  
4 could have, but he quickly evolved to the proper grip.  
5 We would sort of correct him, and what we did is we  
6 had an easel, and we attached the Magna Doodle to the  
7 easel so that he could be standing up, and then he  
8 would hold the pen with the proper grip and do a lot  
9 of drawing. This would be, you know, between six  
10 months, up to -- well, until the regression he was  
11 spending a lot of time drawing really nice, little  
12 figures. It looked like little people and playing  
13 with shapes, and just doing the typical little  
14 exploring with the drawing.

15 We got him toys like a tool bench with all  
16 these little plastic hammers and screwdrivers, and we  
17 also got him a toy kitchen, which was quite large and  
18 had a little stove and a refrigerator, and he seemed  
19 to really like to play with those two things with his  
20 little drill and his hammer, and it had little screws  
21 that you knock into holes and things like that.

22 Q Let me ask you about that. You're saying  
23 when he played with them, he actually used the tools  
24 like you would use tools.

25 A Right. My husband works with tools a lot

KING - DIRECT

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1 and he builds marimbas, and so Jordan would watch Fred  
2 doing those kinds of things with his tools, and  
3 actually Jordan sometimes would even help Fred with  
4 the marimbas when it was time to put the cotter pins  
5 in the hole. Fred would even let him sort of play  
6 with the real hammer, and he definitely was very  
7 imitative of anything that we showed him how to do.

8 Another thing Jordan liked to do was to  
9 dance to music, which is something that is just now  
10 slowly emerging back, but we have these ridiculously  
11 funny videos of him doing silly dances to music and  
12 sort of cooing along with the music, and taking great  
13 delight in that.

14 Q And this was all in that roughly six-month  
15 period, six months and moving forward?

16 A Yes. Yes.

17 Q I know I've interrupted a couple of times to  
18 clarify issues, but if you could go ahead, start  
19 talking again about his progress from six months up to  
20 say that first year of birthday, and what you can  
21 recall now about his development.

22 A Well, I remember that we took him to San  
23 Diego. My husband had a business trip and we went to  
24 San Diego, and I remember taking him to the San Diego  
25 Zoo, and how much fun we had doing that.

KING - DIRECT

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1 He got to meet his uncle, and we were at his  
2 uncle's apartment and I remember him being very  
3 playful and happy then. For some reason trips stand  
4 out in my mind more.

5 When he was eight months old, we went to New  
6 York to visit Fred's relatives, and Fred has quite a  
7 large family, and so there were lots of relatives and  
8 we took more video then than we would normally because  
9 it was a special trip, and I see how much Jordan  
10 enjoyed just reveling in the attention of his cousins,  
11 particularly the younger ones; just falling into  
12 peoples' laps and snuggling and just enjoying people  
13 so much.

14 Then when he was, I think, a year old, I  
15 took him by myself to Florida, and again the same  
16 thing, meeting -- you know, all of my relatives are  
17 there, and meeting all the family, and playing with  
18 his cousins, wrestling on the floor with them, being  
19 silly, just really enjoying the attention of people  
20 and everybody remarking what a sparkley, little guy he  
21 was.

22 Q At these family functions, were there  
23 cousins around who were roughly his age and older?

24 A He was at that time the youngest cousin, and  
25 the age of the next cousin older than him I think was

KING - DIRECT

1140

1 about eight years old, so those were the cousins that  
2 he played with. They just adored him, took him  
3 everywhere.

4 Q So you've got us up to about eight months.  
5 Let's, if you can, move things forward a little bit in  
6 time if you could.

7 A Well, he started walking around nine and a  
8 half months, and once he was able to just take those  
9 first few bobbly steps and fall down the progress  
10 went very fast, and by 10 months I would say he was  
11 walking very well, and by 11 months he was going up  
12 and down our stairs, although I wasn't crazy about  
13 that, but he could do it.

14 So now he's up on his feet and getting into  
15 all sorts of mischief. I think his first words didn't  
16 come until he was about a year old, and of course it  
17 was "mama" that was the first word. The other word  
18 that he really liked was "hot" because we would be in  
19 the kitchen and he would be watching me cook, and one  
20 day I lifted up a pot, a lid of a pot and a bunch of  
21 steam came out, and I looked at him and I went "hot",  
22 so whenever he said that word, he always said it "hot"  
23 because he thought that was how you were supposed to  
24 say that word.

25 "Daddy" came later. I don't remember

KING - DIRECT

1141

1 exactly when, but it was always "daddy", like that.  
2 he loved to say "shoes" because for him when he would  
3 want to go outside, which was really all the time, he  
4 was very much an outside boy, he would go and get his  
5 shoes, and then come up to you and say "shoes", and  
6 that just meant take me outside. He could say  
7 "bubbles" because he loved to be blown bubbles.

8 And then he liked this one TV show called  
9 Blue's Clues a lot, and he started saying "maibox" for  
10 "mailbox" because that's a character on the show, and  
11 Tickety was the clock, and he would always say  
12 "tickety" like that, it was very cute.

13 So we were happy with his progress in the  
14 physical sense and in the language area.

15 Q And let me ask, aside from specific words  
16 that he had, was he able at this point, a year of age,  
17 was he able to communicate his wants to you even if  
18 the didn't have a specific word that he could  
19 articulate? Could he communicate his needs and his  
20 wants?

21 A Oh, yes. I never remembered that being a  
22 problem.

23 Q And how would he do that? Can you remember  
24 specific things that if he wanted something how he  
25 might go about communicating that to you?

KING - DIRECT

1142

1           A     Well, if he wanted me to go outside, he  
2     would bring me his shoes or my keys. Once we caught  
3     him trying to put the keys in the door knob and let  
4     himself out. He would point. He would bring you, if  
5     there was something that he couldn't open, he would  
6     bring it to you to open it. Yeah, he just got  
7     everything that he wanted.

8           Q     Now, moving forward from that first year,  
9     again describe some of the specific progress that you  
10    can remember particularly in these areas that you've  
11    been describing, his behaviors, his interaction with  
12    other people, and his communication.

13          A     He started going to play parks very early  
14    on, and doing a lot of play with other children. He  
15    eventually got a playmate in the area that lived just  
16    two doors down. They had the same birthday, and we  
17    did a lot of outings with them. I just remember  
18    really it was just unremarkable. Everything seemed  
19    perfect and fine. By that time I'm pregnant with my  
20    second child.

21          Q     The playmate that he developed at that  
22    point, in thinking back, was he developmentally at  
23    about the same place she was? In other words, if you  
24    were comparing him to his peers, how did he seem to be  
25    developmentally at that point?

KING - DIRECT

1143

1           A     Just very little difference. He was a  
2     little bit more physically along, I think, but they  
3     were pretty comparable, I would say.

4           Q     Okay. So go ahead then, continue into his  
5     second year of life going to about, it sounds like,  
6     the fourteenth or fifteenth month.

7           A     Okay. Well, at his fifteenth month his  
8     sister was born, and I remember when he was shown his  
9     sister for the first time his father said, give her a  
10    kiss, and he reached down and gave her a little kiss,  
11    and she was brought home the next day, and he was very  
12    curious about her, but mostly just ignored her unless  
13    she made a squawk or something because, you know, she  
14    was just another -- well, just lying in the bassinet  
15    mainly. I don't remember him being as bothered by her  
16    as he became later. These were just happy times, you  
17    know.

18                    We got a double stroller and we would take  
19    them everywhere in this little double stroller, doing  
20    lots of outings. Nothing really at that point was  
21    causing any concern for me as far as how he's doing.

22           Q     Now, there is a medical record indicating  
23    that when he was about 15 months old there was an  
24    emergency room visit involving a fever. Do you recall  
25    that?



KING - DIRECT

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1 A I do.

2 Q Can you describe to the Special Masters what  
3 the circumstances were that led you all to take Jordan  
4 to the doctor?

5 A Well, he had a fever and the fever had  
6 lasted a few days, and we had called an advice nurse  
7 and they said to try to keep him hydrated and give him  
8 Children's Tylenol and rotate Children's Tylenol and  
9 Children's Advil, and I believe he was also vomiting,  
10 and at some point after a few days he wasn't wetting  
11 his diapers anymore, and I think that's what prompted  
12 us to take him to the emergency room because he didn't  
13 seem that interested in drinking.

14 So we took him to the emergency room, and  
15 they just basically said keep doing what you're doing  
16 and they sent us him, and within a couple of days he  
17 just recovered.

18 Q So he was never sent to the hospital or  
19 admitted to the hospital following this ER visit?

20 A No. I think we went in the middle of the  
21 night, and they just sent us home after they checked  
22 him out. We later found out that they were going to  
23 prescribe something for his vomiting but we didn't  
24 even know that we were supposed to get it, and we went  
25 home without it.

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1 Q And in your recollection all of those  
2 symptoms resolved within a couple of days?

3 A Yeah, he was fine after that.

4 Q There was no additional medical care  
5 following from that emergency room visit that you  
6 recall?

7 A No.

8 Q Now, that was at about 15 months. How did  
9 he progress after 15 months?

10 A Everything seemed fine for the next few  
11 months. You know, by now his sister is becoming more  
12 of a presence, and one thing he liked to do that we  
13 weren't crazy about is share his pacifier with her,  
14 take it out of his mouth and stick it in hers. So you  
15 know, it was by then springtime and we're back out,  
16 being outside, playing with his little buddy up the  
17 street. Nothing really concerning.

18 Q Obviously something concerning and  
19 ultimately very concerned happened to spiral here.  
20 How did that start to dawn on you that something was  
21 of concern? What was it and when did it happen?

22 A Well, retrospectively we realized that the  
23 toe walking was probably the first sign.

24 Q And when did that begin?

25 A About 18-19 months.

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1 Now, when we saw that, we thought it was  
2 cute. We thought it was another one of his little  
3 dances, and it wasn't all the time that he toe walked.  
4 Sometimes he would be flat footed, and sometimes he  
5 would be on his toes. That gradually became his main  
6 mode of walking around. So I would have to say that  
7 was the first sign.

8 He started getting diarrhea that never  
9 stopped, you know, and I know that sometimes it was  
10 explosive diarrhea because one time I had him on the  
11 floor and I was changing his diaper and I didn't have  
12 my wipes, and I just went around the corner to get  
13 them and when I came back it was about an 8-foot trail  
14 on the linoleum floor of you know what, and I thought,  
15 wow, that doesn't look right.

16 So the diarrhea was definitely, I would say,  
17 another early sign.

18 Q Was this at about the same 18-month time  
19 frame?

20 A Yes.

21 Q Okay. Around this time were there any other  
22 things that you either noticed then or even looking  
23 backwards now that you would identify as things that  
24 are concerning?

25 A I would say hand flapping started to become

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1 a concern because it started very gradually. He would  
2 go down a slide and just get a little bit of a  
3 physical rush, and then he would walk away doing this.

4 Q And so that the court reporter can catch  
5 that, and I'm not doing this, I'm not making light,  
6 but you were flapping your hands?

7 A Yes.

8 Q And that's what Jordan would do when he came  
9 down the slide?

10 A After he would come down and stand up, he  
11 would do this, sort of -- we thought it was a form of  
12 expressing excitement, and like the toe walking, that  
13 started to become more and more obvious. He would  
14 hand clap for reasons that we couldn't see. He would  
15 just walk around on his toes flapping his hands, so  
16 that was another odd thing that we just kind of -- you  
17 know, we weren't really that informed about autism so  
18 we weren't even thinking autism when we saw that. We  
19 just thought that was one of his little quirks.

20 Q So it takes the retrospective perception for  
21 you to sort of recognize around 18-19 months this is  
22 going on.

23 A Right. It was definitely retrospective. We  
24 had to go back and look at those videos. When he got  
25 the diagnosis, what we did is we looked at all the

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1 symptoms of autism and it was very disheartening to  
2 see that list of all those things that your child had  
3 done.

4 Q And the first thing that anything on that  
5 list emerged, as best you can recollect, was this 18-  
6 to-19-month range?

7 A Yeah, I would say in the spring of that  
8 year.

9 Q Okay. So go ahead. Any other, around the  
10 same period of time any other emerging signals that  
11 something might not be right?

12 A Well, his eyes started to look very sad. I  
13 was concerned about that. I noticed that -- we took a  
14 lot of photographs and, you know, they say the eyes  
15 are the window of the soul, and every picture I took  
16 of him he either looked sad or confused, and I was  
17 concerned about that because before that he had had  
18 just this bright, just go-get-them look on his face.

19 And we actually had some relatives visit  
20 around that time, my aunt and uncle, and I remember my  
21 aunt, she's a therapist of some kind, and she said,  
22 oh, he's just sad. He's mourning the loss of having  
23 your full-time attention because by now his baby  
24 sister is getting to be more vocal and getting around  
25 the house more, those sort of things, and she just

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1 said, oh, you know, just make sure you spend a lot of  
2 special time with Jordan because he's just missing  
3 having all of your attention, and they had a very  
4 brief visit, just for a couple of days. They were in  
5 town for a convention, and they left.

6 So again, you know, it was probably an early  
7 sign but it just got explained away.

8 I think that by that summer I definitely was  
9 feeling like there was something wrong with Jordan. I  
10 thought it might be emotional. He would sit in his  
11 sandbox. Normally before that he would go in his  
12 sandbox and dig and do all the shovel and pail things.  
13 And I remember getting out my video camera and  
14 starting to video tape him, and I put it down because  
15 he was just sitting there, just very forlornly, not  
16 even looking at me with sand in his hands, just  
17 letting it dribble out of his hands over and over, and  
18 it was just a very sad picture to me.

19 He then around the same time started humming  
20 a lot, and that became incessant. I mean, I'm talking  
21 humming for almost every waking minute, this humming,  
22 and then what crept in is this sort of donkey bray  
23 sound, and then I noticed he wasn't saying some of the  
24 words that he would say, and just all of those things  
25 became more and more problematic for us.

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1 Q And this is in the summer of -- it would  
2 have been 1999.

3 A 1999.

4 Q So he is 18, 19, 20 months old. Is that the  
5 correct timeframe?

6 A Yes. Yes. I would say, you know, late  
7 spring, into summer all of his skills were starting to  
8 disappear. I also noticed that his hand hold on his  
9 Magna Doodle pen had gone back to the baby grip. I  
10 don't know what it's called.

11 Q He lost the pencil grip?

12 A He lost his pencil grip. Occasionally I  
13 could correct him and he would hold it that way for  
14 awhile, but it seemed like his preferred way to pick  
15 up and start on his own was the baby grip, and I could  
16 still correct it, you know, but it bothered me that it  
17 wasn't his choice to hold the pen that way.

18 The humming and the donkey sounds were  
19 definitely a very concerning thing because it seemed  
20 to replace his words.

21 Q I was just going to ask you that. It sounds  
22 as if these new sounds are emerging and words are  
23 disappearing.

24 A Yes, and for a long time, maybe a few weeks,  
25 I hadn't heard any words at all, and I was really

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1 just, you know. I wouldn't say starting to panic but  
2 wondering, you know, why is he so sad that he's not  
3 even talking to me anymore. And I remember putting  
4 him on the changing table, and in his room we had a  
5 wallpaper border with the letters of the alphabet with  
6 some animal or object for each letter, and one of his  
7 favorite things to do is I would point to the C and  
8 the D because they were right there by the changing  
9 table, and I would say, "Jordan, what does the kitty  
10 say?" And he would say, "Meeow", and then I would  
11 point to the D, "What does the doggy say?" And he  
12 would go "ruff-ruff", like that.

13 And he had stopped doing that and all of his  
14 words, and after a couple of weeks of hearing nothing  
15 coming out of him word-wise, I pointed to the kitty,  
16 and in a very just quiet tone he just went "meeow",  
17 just like that, and I just thought, oh, good, he's  
18 okay. He's going to be okay, but that wasn't actually  
19 the case. I think that was almost his last gasp as  
20 far as words if you count "meeow" as a word.

21 Q How was he with playing with toys at that  
22 point, because you had mentioned very specific toy  
23 play that he was doing between six months and 12  
24 months?

25 A Well, his toolbench, that was one of his



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1 favorite places to play, he started taking the hammer  
2 or the screwdriver and holding it in front of his  
3 eyes, and just turning it over, like he just wanted to  
4 study it from all perspectives, and he would do that  
5 with the little red hammer and the little yellow  
6 screwdriver, just sort of studying it.

7 On the Magna Doodle what I noticed is that  
8 he would draw the same thing over and over and over.  
9 He would draw it. He would erase it. He would draw  
10 it. He would erase it. And I thought that was kind  
11 of weird. He would draw a circle, he would draw a  
12 line down the circle, and then he would cross the line  
13 three times, and then he would erase it. And I don't  
14 know what that was that he was drawing. I think I  
15 might have shown him that once, and that was his  
16 drawing mantra for a long time.

17 Q Coming out of this 18-19-20-month period  
18 we're noticing all of these concerns and problems  
19 you've identified, what happened after that?

20 A Well, at some point I really thought there  
21 was something wrong with him. The humming was  
22 literally driving us crazy because it never stopped.  
23 Sometimes it would turn into this sort of growling  
24 sound.

25 My husband's sister came and visited us that

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1 summer with her two twin daughters, and she actually  
2 has eight children, and she said to us, what's wrong  
3 with your kid, and that was just more, you know,  
4 outside advice I was getting that maybe there was  
5 something wrong with him, and I respected her advice  
6 because she had had eight children. You know, why  
7 doesn't he look at you, that sort of thing. You know,  
8 he just stopped looking at us. He got these sort of  
9 stares.

10 He would be in his highchair like this just  
11 staring, and I would walk in front of him and he  
12 wouldn't even blink. It was as if he just looked  
13 through you, and he didn't want to be held on my lap  
14 anymore. We would pick him up to put him on our laps,  
15 and he would straighten his body so he could just not  
16 be set down. He didn't want to be touched. He  
17 basically withdrew, and when my husband's sister came  
18 and visited and said, you know, what's wrong with your  
19 kid, I thought, okay, it's not just me.

20 Q What happened after that?

21 A I think around the time of his second  
22 birthday I called our doctor and made an appointment  
23 because I just thought there was something wrong with  
24 him, and that's really where it all unraveled for us  
25 because she asked me a series of questions. She did

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1 notice he wasn't talking. She did notice that he  
2 wasn't having eye contact. She did notice the  
3 humming. He hummed all through the visit, and she  
4 said he's possibly autistic.

5 Q What did she recommend that you do, if  
6 anything, about that possibility?

7 A She said that the best hope for you is  
8 behavioral intervention. She wasn't sure that he was  
9 autistic. I remember her saying to me, well, this is  
10 a big diagnosis, so let's just wait and see. We will  
11 refer you to, you know, a specialist, but I think she  
12 was just saying don't panic, you know, don't fall  
13 apart. He's possibly autistic, and we will do the  
14 proper testing, and that visit was really the  
15 beginning of it for us.

16 Q This was around two years old?

17 A I think it was in October of '99, so he had  
18 just turned two, after having a birthday party where  
19 he did not enjoy the pinata or the company, basically  
20 stayed by himself for his whole birthday party, and  
21 didn't have any fun at all, didn't participate in any  
22 of the games with the other kids.

23 Q So after this discussion with your  
24 pediatrician, what did you do in terms of getting  
25 care, attention, evaluation, anything like that

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1 following on?

2 A I think that she told us that we needed to  
3 go to the neurodevelopmental center for children and  
4 get looked at by a Dr. Buddin, and this is all kind of  
5 a blur for me at this point, but I just remember  
6 having to wait for appointments and being very  
7 anxious. I guess there is all kinds of waiting lists  
8 for these kinds of things.

9 A And again let me interrupt for just a  
10 second. I've mentioned this to Mr. Mead yesterday.  
11 The specifics of doctor visits and medical visits, the  
12 Special Masters do have those records. The Respondent  
13 has those records. So what we're looking for here,  
14 even if things are a blur as you describe it, just  
15 your best personal recollection.

16 A I remember sort of this waiting period in  
17 the last few months of '99. We might have taken him to  
18 an audiologist. I don't remember. What I do remember  
19 is that by January of 2000, we are seeing people all  
20 the time, going here, going there. Of course, we got  
21 on the Internet. We're trying to figure out what  
22 autism even is. The first thing that they like to do  
23 is to rule out deafness, and we were pretty sure that  
24 he wasn't deaf but we went ahead and did the tests.

25 We knew he wasn't deaf because by that time

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1 he couldn't stand the sound of noises, his sister's  
2 cries. We couldn't take him to restaurants or  
3 anywhere like where there was a lot of chaotic type  
4 noise. He would cover his ears, so we knew he wasn't  
5 deaf, but we ruled that out.

6 At some point he got a diagnosis from a few  
7 different places, one was, I think, at the Providence  
8 Neurological Center for Children. My husband took him  
9 to Legacy Emmanuel Hospital, got another official  
10 diagnosis, and then we were told, well, you're  
11 eligible for services now through the Portland Public  
12 Schools early intervention program.

13 They came and did their own three-day visit  
14 to do their own diagnosis to see what services he was  
15 eligible for, so we had all these people looking at  
16 him and telling us he was autistic.

17 Q And universally these different evaluations  
18 all came to the same conclusion essentially that he  
19 did have autism?

20 A Yes.

21 Q After getting that diagnosis, were you given  
22 any directions in terms of care or treatment or  
23 therapy for Jordan to address the autism diagnosis?

24 A Through our pediatrician, we were told that  
25 the best hope was through behavioral intervention, and

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1 that's why she had mentioned the early intervention  
2 program. We got that set up just as quickly as we  
3 could.

4 The first thing they did was put him in a  
5 toddler group which means taking your kid who can't  
6 stand being around other people and putting them in a  
7 portable classroom with dozens of other kids with the  
8 similar idea about wanting to be alone, and trying to  
9 force them to play with each other, and walking on  
10 balance beams, doing things like that.

11 He failed toddler group, so they put him in,  
12 I think it was called a classroom where he got more  
13 one-on-one help. These were the behavioral things  
14 that we did, and it was through the school system,  
15 having speech therapists, and OT, those kinds of  
16 things.

17 Q And this was all starting in early 2000?

18 A I think so, yes.

19 Q At that point he would have been almost two  
20 and a half years old, getting close to that end?

21 A Getting close to that.

22 I had a lot of friends that were healthcare  
23 people so I was asking them a lot of questions, and  
24 one of my friends is a naturopathic doctor. So I  
25 think I took Jordan to her in January of that year

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1 because along with all these regressing behavioral  
2 things he had diarrhea for a year, and that diarrhea  
3 seemed to come on, and projective vomiting too, he  
4 would just throw up and then just walk on and keep  
5 doing what he was doing as if nothing had happened, no  
6 fever, just projectile vomiting. It was not uncommon  
7 to just be walking around the house and find it  
8 somewhere that he had thrown up and you didn't even  
9 know.

10 So I took Jordan to Dr. Jeanne to help him  
11 not just with the autism, but with the diarrhea and  
12 the vomiting, and she told us the first thing you need  
13 to do is to get him off of gluten and dairy, and so we  
14 did it that day. I mean, I went home and cleaned out  
15 the kitchen, put all of our food in a special place,  
16 and I went all over town trying to find gluten-and-  
17 casein-free food, and Jordan did not like that at all,  
18 and that was a tough diet change for him.

19 He got very sick in January as well, so  
20 there were visits for his vomiting and diarrhea, and  
21 Pamela Jeanne, Dr. Jeanne did a workup on him,  
22 checking his, oh, intestinal flora or lack thereof,  
23 and dysbiosis, checking for dysbiosis, and checking  
24 for yeast, and trying to find out why he was having  
25 this chronic diarrhea.

KING - DIRECT

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1           We were also simultaneously still taking him  
2           to our pediatrician, Dr. Roberts, and I mentioned that  
3           we were putting Jordan on this diet, and she said,  
4           well, that's going to be too stressful for you. You  
5           don't need more stress right now. It's not a good  
6           thing to do. She was not supportive of it at all.

7           But by February, we were getting eye contact  
8           back, so at that point the only thing we had done was  
9           get him off of gluten and dairy.

10          Q     And doing some of the occupational therapy,  
11          speech therapy?

12          A     Well, that I don't even think had started  
13          yet.

14          Q     Okay. That's what I wanted to get the  
15          sequence right. You started the diet first.

16          A     The diet was in January.

17          Q     Okay. And then added OT, occupational  
18          therapy.

19          A     Well, the first thing he did, no, was to go  
20          to this toddler group.

21          Q     Toddler group. It sounds like that didn't  
22          last particularly long.

23          A     We forced our way through it. I felt like  
24          he was miserable the whole time.

25          Q     Okay.



KING - DIRECT

1160

1           A     And they tried to give intelligence tests  
2           and he couldn't even take them, and I didn't see the  
3           point of trying to give a child an intelligence test  
4           at that point.

5           Q     Okay. So you start with the diet. Then  
6           there are some therapeutic interventions around  
7           behavior. What other things were you doing at about  
8           that time, again sort of moving forward in time  
9           chronologically?

10          A     Well, I think in February, we had started --  
11          we had heard about John Green, Dr. Green, through  
12          other parents of autistic children. We had been  
13          online. We pretty much begged our way into his  
14          office. He was by invitation only, and another  
15          doctor, another DAN doctor sort of put in a good word  
16          for us, and we started seeing John Green, and any  
17          tests that Pamela Jeanne would do, we would have them  
18          sent to Dr. Green.

19                 At some point we transferred over completely  
20          to Dr. Green as Jordan's doctor, and Dr. Green was  
21          also very much interested in the chronic diarrhea and  
22          did similar tests. He also did a heavy metals test.  
23          He said, I want to do a heavy metals test on this  
24          child, and I thought, oh, no, it's lead. And we got  
25          those results back, and he said, I want to do this

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1 test again, only now I want to do a provoked test,  
2 which means that you give your child, I believe he was  
3 given chemet, a provoking agent.

4 And we ran the same test again, and the test  
5 results were mailed simultaneously to the doctor and  
6 to us. And when we got those results back, we saw  
7 that he was in the 96th percentile for mercury, and  
8 that just -- you know, even just visually on the page  
9 seeing that line go all the way over to the far right  
10 of the page is very upsetting to me, and I thought,  
11 oh, no, we're being exposed to something toxic, and  
12 that's what happened to Jordan.

13 We went in and talked to Dr. Green about it.  
14 He explained to us chelation and what that involved,  
15 and that was a therapy that we started, I think, in  
16 March, around then, I'm not really good on the dates,  
17 but --

18 Q And again, those will be in the medical  
19 records so right now just your best recollection.

20 You mentioned a minute ago that when you saw  
21 the mercury results you were concerned that there was  
22 some toxic exposure was the term that you used. So  
23 you were concerned when you saw those results that  
24 there might be a toxic exposure that Jordan had  
25 encountered?

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1 A Oh, yes. Yes.

2 Q What did you do in response to that concern?

3 A Well, Dr. Green told us to chelate, so we  
4 did that. We did things that, you know, were helpful  
5 to Jordan's body, that would help his body to just  
6 naturally chelate. We had some nutritional  
7 supplements, some things to deal with his dysbiosis.

8 At some point, even though we had learned  
9 about the thimerosal in the vaccines as being the --  
10 you know, a known exposure to mercury, at some point I  
11 just wanted to rule out that he wasn't getting it from  
12 somewhere else, and we ran a test on me because I  
13 thought what if I had passed that to Jordan. So we  
14 ran a test on me and that came up with nothing  
15 significant.

16 Then we decided to do a vapor test on the  
17 house, so we researched some labs and found one just  
18 outside of Portland, and did this vapor test, and that  
19 came back with, you know, no detectable limits, so we  
20 ruled that out.

21 We started researching. The people who  
22 owned the house before us, we thought, you know, what  
23 if they were doing something here that they weren't  
24 supposed to be doing like a meth lab or, you know,  
25 anything that would leave toxins on the house. We

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1 talked to the neighbors. Nothing seemed to pan out  
2 there.

3 We did lead swipes to check our house for  
4 lead.

5 Q Is this an older house?

6 A It is an older house. Before the sold it to  
7 us they painted everything, and left the cans of paint  
8 down in the basement so we were down there looking to  
9 see what kind of paint they had used.

10 We checked for a toxic mold, I think it's  
11 called stachybotrys. We had been reading some  
12 articles in our newspaper about homes that had mold so  
13 bad that children were having developmental delays, so  
14 we found a lab that would do a test for that mold, and  
15 we checked our window sills and places like that, and  
16 that came back negative.

17 We even checked Jordan for giardia, because  
18 I had read where even things like that can cause  
19 developmental delays. I think we had him checked for  
20 tuberculosis. I don't know why. I think because we  
21 had a homeless population that liked to gather across  
22 the street from our house, and I would hear a lot of  
23 coughing over there, and you know, we checked him for  
24 diabetes. Yeah, we just wanted to rule out anything  
25 that we could.

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1 Q So it sounds as if ultimately you ruled out  
2 a whole list of things that you felt might be  
3 contributing to any toxic exposure.

4 Q Right. Just anything. We just sat down and  
5 racked our brains, what have we done or what have we  
6 been around that could have caused his demise.

7 Q The work that you're doing at this point to  
8 identify possible sources of an exposure, he is  
9 undergoing care with Dr. Green at the same time, is  
10 that correct?

11 A Yes.

12 Q What sort of things was Jordan doing with  
13 Dr. Green, and what's your understanding of what the  
14 goal of Dr. Green's care was at that early point?

15 A Dr. Green's goal was to get the mercury out  
16 of his body, and to get a handle on his dysbiosis.

17 Q You have used that term. What's your  
18 understanding, again not as a medical expert but just  
19 as it's been explained to you by your doctors, and as  
20 you use the word, what do you mean by guy dysbiosis?

21 A It means when you have all of the wrong kind  
22 of bacteria and none of the right kind of bacteria in  
23 your digestive system, in your colon, small intestine,  
24 you know. It means a yeast overgrowth. It means that  
25 undigested fats and proteins were passing through him.

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1165

1 There was a test that would check for -- literally for  
2 undigested protein, undigested fats. Everything was  
3 just going through Jordan.

4 Q Was the idea that by focusing on the  
5 dysbiosis that these gastrointestinal symptoms, the  
6 diarrhea, projectile vomiting, I'm assuming this was  
7 all focused on dealing with those symptoms?

8 A Yes.

9 Q Okay.

10 A And in fact, we did get a handle on that.  
11 In February, I remember after being just a few weeks  
12 on a gluten-and-casein-free diet, Jordan had a formed  
13 stool for the first time, you know, in at least a  
14 year, and that was very nice to see.

15 So working with Dr. Green through that year  
16 his digestion problems did improve, and you know, the  
17 projectile vomiting went away. That was nice. The  
18 diarrhea definitely subsided to the point where we  
19 could even think about trying to potty train him.  
20 It's really had to potty train a child with explosive  
21 diarrhea.

22 Another treatment that John Green had us do  
23 was glutathione, B12 shots, and B12 shots are  
24 something that we continue to this day. I don't know  
25 why, but if I give Jordan a B12 shot every three days,

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1 he is just much better off. And if I forget, it's bad  
2 news. And when we started the B12 shots, shortly  
3 thereafter Jordan finally was toilet trained, and has  
4 remained that way to this day. He is completely  
5 toilet trained.

6 Q Now, you had mentioned all of these things  
7 going on in that first year of care with Dr. Green.  
8 This was 2001. So from January '01 towards the end of  
9 '01, this is the course of care that you were  
10 pursuing?

11 A Yes.

12 Q You've mentioned that by doing this  
13 specifically he got some of his eye contact came back?

14 A Yes.

15 Q His GI, his gastrointestinal problems  
16 resolved?

17 A Yes, and some words came back too.

18 Q Yes, I was going to ask. Was there any  
19 other improvements that you saw in that first year of  
20 care with Dr. Green using the therapies you've  
21 described?

22 A He was starting to bring back a couple of  
23 his words, "more", "mama", that gave us a lot of hope.  
24 One thing that they were doing in his early  
25 intervention was teaching him sign language, doing

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1 this for more, doing this for eat, things like that,  
2 and he was picking that up very quickly, and I think  
3 in a way that helped his communication.

4 One day I was in the kitchen just reading  
5 the paper and he was eating, and I heard the word  
6 "more" come from him, and he wanted more, and I just  
7 remember my heart just leaping in my chest because he  
8 spoke to me unprompted. He could sometimes repeat  
9 back something if you said it to him. You know, he  
10 would say "more" if you said "more" after we changed  
11 his diet, but the fact that he had said it  
12 intentionally because he wanted more food was very  
13 encouraging.

14 So you know, with the GI stuff improving,  
15 the eye contact coming back, the humming starting to  
16 subside, although that did take awhile, and the fact  
17 that he was starting to say words, you know, "M" words  
18 were the easiest thing for him to say. That was very  
19 encouraging and that's why we've stuck to the diet,  
20 stuck to just being extremely healthy with the foods  
21 that he eats, and staying with John Green for so long  
22 because he definitely helped us get Jordan back.

23 Q Yes, and that brings us to the question I  
24 wanted to ask about how Jordan is doing today, and I  
25 would like you to be as specific with the Special



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1 Masters as you can be because, again, they have the  
2 records of these last seven years, and we're not going  
3 to walk through those, but if you could just summarize  
4 how he is now in as much detail as you can.

5 A Well, Jordan is now 10. He doesn't walk on  
6 his toes. He only flaps his hands if something  
7 excited him. He is still definitely -- well, he's  
8 very affectionate, and he's very loving, and he gives  
9 kisses, and his receptive language is very high. We  
10 can say, "Jordan, let's go outside, go get your  
11 shoes." He gets his shoes.

12 "Jordan, it's time for the bus." He goes to  
13 the front door, gets his backpack, gets on the bus.  
14 "Jordan, don't do that," he stops. It's in a way it's  
15 a little bit frustrating that his receptive language  
16 is so high, and yet the words he can say we're still  
17 working on that.

18 He's in the meantime learned to communicate  
19 with sign language, and we also got him a  
20 communication board which is a device that has panels,  
21 there are eight panels on it, and you can interchange  
22 them up to 12 times, and there will be pictures or  
23 words of things like juice or outside or, you know, a  
24 video, and he can press a button and it will say what  
25 he wants. So it's a way for him to talk to us, and he

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1 uses that very well.

2 So we know that there is a lot going on in  
3 his brain, and we try to treat him as normally as  
4 possible even though he can't talk to us very well,  
5 but he communicates through those means.

6 He dresses himself. He can do a pretty  
7 complicated routine of things like, "Jordan, it's time  
8 to take a bath." He goes in the bathroom, takes off  
9 his clothes, gets in the tub, rubs himself with a  
10 soapy washcloth, gets out, dries himself off, dries  
11 between his toes, goes upstairs with his dirty  
12 clothes, puts them in the laundry chute, goes to his  
13 room, gets his pajamas, puts them on. I mean, that's  
14 a huge thing for us.

15 In the morning, he has a school routine of  
16 getting ready for the bus. He has a toothbrushing  
17 routine where he brushes, flosses, rinses, goes to the  
18 toilet, and then goes to bed. He does all of those  
19 things on his own.

20 Q What does he do for play?

21 A For play, he very much likes to go outside  
22 and swing on his swing, climb on his Jungle Jim. My  
23 husband rigged a trapeze in a walnut tree that the  
24 rope is very long. We have a huge back yard area. We  
25 have a double deep lot. So he swings on this trapeze

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1 with amazing dexterity. We think he's going to join  
2 the circus some day. Loves doing that.

3 Loves taking walks, going to the park, and  
4 likes watching Blue's Clues, and loves playing with  
5 his trains. He is a train boy. We've got trains all  
6 over the house, pushes them around on the track. We  
7 have some that are electric and some that you have to  
8 push around, and he loves watching Thomas the Tank  
9 Engine on television.

10 Q Now, when he plays with toys like the  
11 trains, is this the kind of play where he's using them  
12 as one would -- does he stare at them and --

13 A He doesn't do that anymore. He likes to  
14 hook them all up together, and pull them around the  
15 track. We have some that are battery-operated, and he  
16 likes to rearrange where the tunnels are. He loves to  
17 make bridges for the trains for some reason, just  
18 rearranging the track to different configurations, and  
19 either pushing them around or watching the automatic  
20 ones go around the train track.

21 He also loves Hot Wheel cars, and Hot Wheel  
22 track, setting it up. You know, we have about 50 feet  
23 of it that we can make it run the whole length of the  
24 house and do loopy-loops, so he loves playing with  
25 cars and trains, you know. It was very encouraging

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1 for us because those are supposed to be typical little  
2 boy things that he likes to do.

3 He doesn't really just take a car or a train  
4 and sort of study it with an intense focus or just  
5 spin the wheels. He plays with them appropriately.

6 He also likes to play again with his sister  
7 that they call "chase and chin-je", and that's a word  
8 my daughter came up with. My daughter is interested  
9 in martial arts, and because Jordan likes to press his  
10 chin into things, and have a lot of pressure there,  
11 she calls it "chin-je", and they chase each other.  
12 She can look at him with these eyes like you better  
13 get ready, I'm going to chase you, and he takes off  
14 and they run around and they chase each other, and  
15 then when she finally catches him, he chins her. I  
16 don't know why that's so much fun for them, but I  
17 think my daughter is great grateful to have anything  
18 from him.

19 Q And so she can initiate this game just by  
20 looking at his face, and he looks at her face?

21 A Yes, and so can I.

22 Q Would he even look at people's faces when he  
23 was three years old?

24 A When he was three?

25 Q Or when you would think as the worst, did he

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1 make eye contact and have that social back and forth?

2 A No, that was a big problem for us is that he  
3 wouldn't look at us. He would look through us. He  
4 would look around us. I would sort of position myself  
5 to force him to look at me, and he would do anything  
6 but look at my face.

7 Q And he seeks out that sort of contact now,  
8 is that fair?

9 A He actually can read faces really well now.  
10 That's another big progress that we've made. For  
11 instance, I'll give you an example. If he is sneaking  
12 something that he's not supposed to have, and I peak  
13 around the corner and I look at him, he looks at me,  
14 and he just sort of freezes. And if I go like this,  
15 like it's okay, he will do it. But if I go like that.

16 Q Make the mad face?

17 A I make the mad face. He sort of, you know,  
18 is embarrassed or chuckles, and then moves away from  
19 the object. And I actually try to do that with him as  
20 much as possible because one thing that I read about  
21 autism is that they can't read peoples' faces, and I  
22 know now that for Jordan that's not true. He can  
23 definitely read your face, read your emotions, and he  
24 can read your tone of voice.

25 One thing that we have to do in our house is

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1 when we speak to each other we have to make sure the  
2 tones don't come out as being harsh or scolding, and  
3 if you talk in a pleasant voice, a happy voice, he  
4 reacts to that. But if I'm scolding my daughter, for  
5 instance, you know, "Mia, stop doing that", Jordan  
6 goes, "uhhh", like he's in trouble or something. He  
7 can definitely read people's emotions, and that's a  
8 big progress for us because for awhile my daughter  
9 could hurt herself and fall and cry, and everybody  
10 would be upset, and he would just laugh. But now he  
11 has this sort of reciprocal emotion. You know, it's a  
12 nice human thing to have.

13 Q And I don't know if you can answer this or  
14 not, but if you think of Jordan and how he was at the  
15 point where you believe he was at his worst in terms  
16 of his symptoms, and where he is now, what's the  
17 single biggest area that you think he's improved in?  
18 And again, not medically, but what's the most  
19 significant to you as a parent? And if there is not  
20 just one, if there are more, that's fine too.

21 A For me as a parent, the biggest thing is  
22 that he shows love. He shows affection. He cares  
23 about what I think. When I'm gone and I come home,  
24 he's happy to see me. He doesn't just walk around as  
25 if I hadn't even entered the room. He cares about

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1 what I think of him. If he's done something bad, he  
2 is now showing signs of being ashamed or being sorry.  
3 He does things like when I tuck him at night he in his  
4 sign language says, "I love you", and when he touches  
5 me, he touches me here and he draws his finger down  
6 like this, and he stops at my heart, and he tells me  
7 he loves me, and I know he knows what it means. That  
8 for me is the biggest thing.

9 If he ends up never talking, that's okay. I  
10 know that he is a human being.

11 MR. POWERS: Nothing further.

12 SPECIAL MASTER HASTINGS: Thank you very  
13 much, Mrs. King.

14 Respondent, do you have any questions?

15 MS. ESPOSITO: Yes.

16 SPECIAL MASTER HASTINGS: Please, go ahead,  
17 Ms. Esposito.

18 CROSS-EXAMINATION

19 BY MS. ESPOSITO:

20 Q Good morning, Mrs. King.

21 A Good morning.

22 Q My name is Katherine Esposito. I represent  
23 the government. I would like to echo the sentiments  
24 of the Special Master this morning, and my colleagues  
25 earlier this week. We have certainly seen countless

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1 hours of video from your family, and we recognize the  
2 journey that you have been on with Jordan's care in  
3 the last decade. It's very clear to all of us that  
4 you love him very much.

5 I would like to go back to when you first  
6 had concerns about Jordan's development and his  
7 behavior. When was the first time that you thought  
8 that there was something that was abnormal about  
9 Jordan's development?

10 A Well, like I said, when we saw him toe  
11 walking and flapping, we thought those were just cute  
12 mannerisms.

13 Q When did that emerge?

14 A Around 18-19 months.

15 Q And that was the very first thing that --

16 A Well, retrospectively, yes.

17 Q Okay. And there were other people in your  
18 family who shared those concerns?

19 A Nobody lives in Portland that's related to  
20 us, so I would have to say no.

21 Q And the first time that you shared your  
22 concerns about Jordan's development with Dr. Roberts,  
23 his pediatrician, that was at the two-year visit?

24 A Yes.

25 Q From what you can recall, when did Jordan



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1 first start speaking? When exactly did he say "mama",  
2 his first word?

3 A He had a lot of babble that every once in  
4 awhile would accidently come out as maybe a word, but  
5 I would have to say he was close to his first birthday  
6 before he had a "mama" or a "bye".

7 Q And the records show that he had about five  
8 words at the beginning?

9 A What do you mean by beginning?

10 Q When he first started speaking. I think  
11 some of the words were "ball", "juice", "shoes".

12 A Shoes, yeah.

13 Q Can you recall any other words aside from  
14 that that he spoke?

15 A Well, he did have the word "hat" because he  
16 liked the word "hat". He said "mailbox", "daddy" came  
17 later. I really don't have an exact chronology of  
18 when each word came to him. I can just remember the  
19 words that I remember him speaking, "bye", "ball",  
20 "Tickae" for the character on Blue's Clues, "hot".

21 Q I would like to direct your attention to  
22 when Jordan was seen by Dr. Green. You first found  
23 out about Dr. Green from the Internet, is that right?

24 A From other -- yes, from other parents who  
25 had seen him. There was a -- I forget what they

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1 called it, some sort of chat room that we were told  
2 that he was the best guy in town.

3 Q The records describe Jordan as having some  
4 unusual abilities with music, drawing, his sense of  
5 direction, problem-solving, and Dr. Green has termed  
6 that as possible savant, he used that term in the  
7 records.

8 Can you go through some of those, some of  
9 Jordan's unusual abilities such as the sense of  
10 direction? Can you describe that?

11 A Well, that is something that Jordan had more  
12 remarkably after his regression, being able to -- if  
13 we went somewhere in a big building that you had to go  
14 up to a certain floor and get off a hallway and turn a  
15 certain way, and then go in a certain door. If we  
16 went there once, if we were to return to that place, I  
17 would just follow Jordan because he knew the way to  
18 get to that place.

19 Q What about his musical abilities? He would  
20 look at you when you sang, is that correct?

21 A Oh, he loved singing. He loved to hear  
22 singing. He liked music, so does my daughter. We  
23 have a piano, a marimba, a base, kazoos, an electronic  
24 keyboard. We have all sorts of musical instruments  
25 just lying around the house that he liked to explore

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1 and play. Bang on, actually.

2 Q What about his problem-solving skills?

3 There is a note in the record, it's about Jordan being  
4 able to obtain an item that he wanted on a high shelf.

5 A Well, he would push a chair over and then  
6 crawl up in the chair to get to something that was too  
7 high for him to reach.

8 Q Was that something he did often?

9 A Once he was physically able to, yes.

10 Q And you mentioned his drawing with a Magna  
11 Doodle. Did he also write his name at one point?

12 A He did, and that was -- that was after his  
13 regression that he stunned us because I had written J  
14 on the -- well, before that I had always tried to --  
15 we were sad because he no longer was interested in  
16 drawing at all.

17 Q At what point was he no longer interested in  
18 the drawing?

19 A I would say by the end of '99, early 2000.  
20 He just wasn't playing with his Magna Doodle anymore,  
21 and that was one of his favorite toys. And something  
22 that I would do, I would draw his name for him. I  
23 would try to get him to watch me just draw his name  
24 very carefully, Jordan, and then I would erase it, and  
25 maybe I would do it again, and he would usually walk

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1 away, and one day we were in the kitchen preparing  
2 food and I had written just the J on the Magna Doodle,  
3 and walked away, and at some point my husband looked  
4 down and saw J-O-R-A-N. He forgot the D.

5 And he said, "Did you do that?" And I said,  
6 "No." And we actually took a picture of that because  
7 it was very remarkable to us that he had done that.  
8 But again, I believe that was done after he was  
9 autistic.

10 Q Was Jordan sick as a child?

11 A Not particularly. He had occasional  
12 episodes with a cold. He did have that one visit to  
13 the emergency room for his fever and vomiting, but I  
14 don't really recall him being a sick child, just the  
15 normal occasional diaper rash. I think he had an  
16 episode with what they thought was croup that resolved  
17 itself quickly. So I felt like he was just, you know,  
18 having the normal childhood illnesses.

19 Q There was a note in the records that Dr.  
20 Green thought Jordan had a chronic measles infection  
21 of the gut. Was that your thought at the time as  
22 well?

23 A No, it wasn't my thought. I think Dr. Green  
24 might have suspected that because of this chronic  
25 diarrhea and bowel inflammation and everything related

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1 to his digestive problem. I didn't even recall if we  
2 did any testing for that or not.

3 Q When did you come to think that Jordan's  
4 autism was caused by thimerosal-containing vaccines?

5 A When we ran for tests on him, and the  
6 mercury level was in the 96th percentile, and we  
7 couldn't find a source of mercury from any other  
8 source, around our house, through me. That's when I  
9 really decided that that's where the problem came  
10 from.

11 Q We're going to put on the screen a list of  
12 medications and supplements that Jordan was on. I'm  
13 going to ask you a couple of questions about them.  
14 This is Jordan King Exhibit 7 at page 17 and 18.

15 Let's look at No. 7 on the list, enzyme aid.  
16 Do you know what that was for?

17 A That is for -- it's a digestive enzyme that  
18 helps breakdown casein and gluten, and the reason we  
19 took that is because Dr. Green said that even when  
20 you're trying very hard to be on a gluten-and-casein-  
21 free diet that those ingredients are so pervasive in  
22 things that you would least expect, and sometimes  
23 facilities that process wheat also will process your  
24 rice cereal, and there might -- you know, you  
25 basically just can't be positively 100 percent sure

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1 that you're completely eliminating gluten and casein,  
2 and that was just sort of a backup for that in case he  
3 accidentally got some gluten or dairy.

4 Q What about No. 28, the entrocip, do you know  
5 what that was for?

6 A I think that was to kill off the bad  
7 bacteria that he was not supposed to have in his  
8 system.

9 Q And in addition to the medications listed on  
10 this exhibit, Jordan was also on intravenous  
11 immunoglobulin therapy, is that correct, the IVIG  
12 therapy?

13 A I think we tried that.

14 Q Who recommended that you do that?

15 A Dr. Green.

16 Q And did Dr. Green administer that treatment?

17 A Yes.

18 Q He did? And that was a couple of times?

19 A One or two. I don't remember.

20 Q And you mention that he was chelated as  
21 well, correct?

22 A He's still chelating.

23 Q He is chelating. Okay.

24 Jordan was also on Eskimo oil at one point.

25 A Yes.

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1 Q What is that for? Do you know?

2 A That's a fish oil.

3 Q Okay. And Jordan was also on valtrex?

4 A Yes.

5 Q Is that correct?

6 A Yes.

7 Q Do you know what that's for?

8 A That was an antiviral.

9 Q And he has also been on secretin?

10 A Yes.

11 Q And what is that for? Do you know?

12 A That's something that your pancreas make  
13 that help with digestion, and just around the time  
14 that Jordan got his diagnosis, and we started seeing  
15 specialists and Dr. Green there was a lot of  
16 information out there about secretin helping some  
17 children because in a young autistic boy who was  
18 brought in for some digestive tests was given secretin  
19 just as kind of a -- to help with the test. It wasn't  
20 meant to help with his behavior. And the boy started  
21 talking and improving, and for that child it ended up  
22 being a really good thing.

23 So there was a lot of information that  
24 perhaps secretin would help children, and we did try  
25 it, and it did seem to improve his eye contact and his

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1 digestive problems, and we actually took part in a  
2 secretin study at OHSU where a child was given six  
3 doses of secretin or a placebo, and then you were  
4 supposed to report on your findings.

5           Unfortunately, Jordan got the placebo, and  
6 after the study was over they wouldn't tell us for a  
7 long time whether he had gotten the secretin or the  
8 placebo, and we didn't want to continue with secretin  
9 until we knew whether it was going to really help him  
10 because that's a hard thing to do because it was  
11 intravenous.

12           Q     There was also a mention in the records  
13 about possibly trying Jordan on actose. Do you know  
14 if Jordan ever took that?

15           A     I don't recall that he took that. I don't  
16 even remember what that was for.

17           Q     Do you keep track of when Jordan would go on  
18 and off a supplement?

19           A     Oh, yeah. We had a chart that we would pin  
20 inside the cabinet door where the supplements were  
21 because it was -- you know, it was fairly complicated.  
22 Some things were supposed to be given on a empty  
23 stomach and some were supposed to be given with food.  
24 Some where supposed to be done just at nighttime  
25 before he went to bed, so we had charts that would



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1 help us manage that.

2 Q Does Jordan eat any fish?

3 A Does he now?

4 Q Yes.

5 A He does. He eats -- oh, what's it called --  
6 he likes halibut, I think, but we do limit the fish,  
7 but he will eat it.

8 Q So he eats it today?

9 A Yes.

10 MS. ESPOSITO: Thank you. I have nothing  
11 further.

12 SPECIAL MASTER HASTINGS: Any redirect, Mr.  
13 Powers?

14 MR. POWERS: No redirect, Special Masters.

15 SPECIAL MASTER HASTINGS: Most of the  
16 questions that I had for you, Ms. King, have been  
17 answered. I'm going to ask you one question. I think  
18 I know the answer to this, but just to make a record  
19 of it.

20 At one point you mentioned that someone was  
21 a DAN doctor. Can you tell us what that means?

22 THE WITNESS: Defeat Autism Now.

23 SPECIAL MASTER HASTINGS: That's an  
24 organization?

25 THE WITNESS: Yes.

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1 SPECIAL MASTER HASTINGS: And they have  
2 doctors who are members of that organization?

3 THE WITNESS: Right. As I understand it, in  
4 order to be a DAN doctor you have to go through a lot  
5 of training and have a certain protocol for dealing  
6 with autism through dietary intervention and dealing  
7 with the sort of the physical issues as well as the  
8 mental issues.

9 SPECIAL MASTER HASTINGS: All right. Well,  
10 that's all that I had. Anything further?

11 MR. POWERS: Nothing to follow up, Special  
12 Master.

13 SPECIAL MASTER HASTINGS: All right. Well,  
14 Ms. King, thank you very much for your testimony.

15 THE WITNESS: Thank you.

16 SPECIAL MASTER HASTINGS: That was certainly  
17 moving testimony and it's certainly obvious that  
18 Jordan is very much loved and well taken care of by  
19 his family, so we thank you again for being with us  
20 today.

21 THE WITNESS: Thank you.

22 SPECIAL MASTER HASTINGS: You're excused at  
23 this point.

24 (Witness excused.)

25 SPECIAL MASTER HASTINGS: Counsel, why don't

1 we take our mid-morning break.

2 MR. POWERS: I think that would be  
3 appropriate.

4 SPECIAL MASTER HASTINGS: I've got 10:28.  
5 We will reconvene about 10:45.

6 MR. POWERS: I was hoping you weren't going  
7 to say 10:43.

8 (Laughter.)

9 (Whereupon, a short recess was taken.)

10 SPECIAL MASTER HASTINGS: We're going to go  
11 back on the record here, and I see we have Dr. Mumper  
12 in the witness chair.

13 Dr. Mumper, if you could raise your right  
14 hand for me.

15 Whereupon,

16 ELIZABETH MUMPER

17 having been duly sworn, was called as a  
18 witness and was examined and testified as follows:

19 SPECIAL MASTER HASTINGS: Please go ahead,  
20 Mr. Powers, and Dr. Mumper, it will be easier for us  
21 to see you if you can move as far as you can to the  
22 right. Be careful because there is a drop off there.  
23 We don't want to lose you, but as far as you can go  
24 the right would be great.

25 Go ahead, Mr. Powers.

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1 MR. POWERS: Thank you, Special Masters.

2 DIRECT EXAMINATION

3 BY MR. POWERS:

4 Q Good morning, Dr. Mumper.

5 A Good morning.

6 Q Dr. Mumper, could you say and spell your  
7 name for the record here or the transcript?

8 A Yes. It's Elizabeth Mumper, M-U-M-P-E-R.

9 Q And that would be Doctor?

10 A Yes.

11 Q And an M.D. doctor, correct?

12 A Yes. I do have an M.D.

13 Q Okay. Well, that's a very natural jumping  
14 off place to begin our discussion. You're a medical  
15 doctor, and I would like to begin with your explaining  
16 to the Special Masters your educational and  
17 professional background, basically the skills and the  
18 training that you bring that informs your opinion in  
19 these cases.

20 A Okay. I went to Bridgewater College because  
21 my father was a professor there, and I didn't have to  
22 pay tuition, and majored in general science, and  
23 graduated magna cum laude.

24 Then I went to the Medical College of  
25 Virginia in Richmond to get my M.D. degree. From

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1 there I went to the University of Massachusetts  
2 because my husband had gotten a fellowship at the  
3 Brigham in Boston, and did an internship there.

4 I went to the University of Virginia as a  
5 second year pediatric resident, and was invited to  
6 stay on for a fourth year as chief resident there.  
7 The chief residency was a junior teaching position  
8 where the attendings would vary. You would do rounds  
9 on one day, and then I would run rounds with the  
10 residents on the alternate days, and enjoyed that very  
11 much.

12 After my residency, I was invited to join a  
13 group practice in Lynchburg, Virginia, and I practiced  
14 there for five years doing general pediatrics, and  
15 then after that I had the opportunity to teach in a  
16 residency program that was affiliated with the  
17 University of Virginia but was located where I was  
18 practicing, in Lynchburg. It was a family practice  
19 residency program, and there I was director of  
20 pediatric education. So it was my job to develop a  
21 teaching curriculum for doctors who were ultimately  
22 going to be family physicians and general  
23 practitioners.

24 I did that job for about 11 years, and  
25 during that time was when I first became concerned

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1 about what I perceived as a change in children's  
2 health. When I was very early in my career, it did  
3 not seem that the incidence of chronic disease  
4 presenting to the general pediatrician was as high as  
5 it seemed to become somewhere in the mid-nineties is  
6 when I recognized it.

7 So in about 1996, I started working on a  
8 project and actually applied to the local community  
9 hospital for some grant money because I perceived that  
10 there is an increase in children with ADHD and autism  
11 and asthma and allergies, and thought that somebody  
12 ought to look into it, and in our community there was  
13 a very real need for somebody to take care of those  
14 children because the parents would report that they  
15 have had difficulty finding services.

16 So in developed that grant, and we were  
17 awarded actually \$27,000 to work on a way to provide  
18 services for these children.

19 In the meantime, the leadership of the  
20 residency changed, and my perception was that the  
21 acting director was more supportive of that program  
22 than the incoming director who understandably had the  
23 highest priority to train family practice residents.

24 So I had this sort of strong calling that I  
25 should continue to look into this. So I left the

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1 residency as a teacher, and went to establish a  
2 practice that I called Advocates for Children.

3 I would like to mention by way of  
4 establishing my qualifications at the residency that I  
5 was again honored by the residents as being Teacher of  
6 the Year one of the years I was there, and that  
7 typically when I taught the residents, they on their  
8 in-service exams either scored best in pediatrics or  
9 second best in pediatrics among the many subjects that  
10 they had. It was six to eight different subjects like  
11 internal medicine, surgery, et cetera.

12 So I started my practice in a small basement  
13 office, and started seeing all these kids that had  
14 developmental problems, and I do need to clarify that  
15 I am a general pediatrician. I am not a behavioral  
16 and developmental pediatrician, and do not want anyone  
17 to misunderstand that. So my approach to these  
18 children has always been very much in the realm of  
19 trying to look for and find any potential medical  
20 problems that they have.

21 Q And let me interrupt you, Dr. Mumper, just  
22 to put a couple of dates on this. When was it that  
23 you opened the practice that you've called Advocates  
24 for Children?

25 A That was in 2000.

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1 Q And up to that point how many years had you  
2 been a doctor?

3 A Since 1980, so is that 20 years?

4 Q Twenty years. That's relatively easy math  
5 for me, at least. So 20 years as an M.D., and during  
6 that entire time was your medical focus on pediatrics?

7 A Yes, that's true.

8 Q And so then the year 2000 is when you went  
9 entirely into private practice as a general practice  
10 pediatrician?

11 A Right.

12 Q Okay.

13 A So, I, in the process of this experience,  
14 met some colleagues, notably Mary Megson, who  
15 practices developmental pediatrics in Richmond, and  
16 she invited me to come and look at her practice, and  
17 when I did, I began to understand some of her  
18 perspectives about how to take care of these children.

19 Q Excuse me. When you "these children", what  
20 children are you talking about?

21 A I'm talking about children with autism and  
22 related disorders, so autism spectrum disorders as  
23 well as ADD/ADHD.

24 So one thing led to another. I became  
25 friends with Mary. She invited me to come to a Defeat



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1 Autism Now Conference, and I did that, and was blown  
2 away by the people that I met there. One of the first  
3 people I got to know was Sid Baker, who was former  
4 director of the Gesell Institute at Yale, and has this  
5 wealth of knowledge gained over many, many years of  
6 practice that I regard as wisdom.

7 I met these research scientists that I have  
8 come to be able to ask questions on a one-on-one  
9 basis, and they help me understand the more technical  
10 aspects of their research papers which often are in  
11 areas that I don't have any fellowship training in.  
12 And within a couple of years I was actually invited to  
13 become the medical director of that organization, and  
14 I believe that was sometime around 2004, but I  
15 actually am not positive about that date.

16 Part of my responsibilities at ARI now, ARI  
17 is the Autism Research Institute, which is the parent  
18 organization of the Defeat Autism Now, a collection of  
19 people. Our model is that we are comprised of  
20 parents, clinicians, and researchers, and this is a  
21 very unusual model for moving science forward.

22 But we have found that the parents have been  
23 an extraordinary reliable source of information about  
24 things that needed to be pursued scientifically. And  
25 so in our meetings we have parent representatives, and

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1 in our think tanks we have parents there who help us  
2 with clinical correlations and help inform the  
3 research agenda, and that's been very gratifying.

4 And we typically hold two major conferences  
5 a year, one in the spring and one in the fall, and we  
6 hold two big think tanks a year. There have been one  
7 or two occasions where we held three a year. And then  
8 I typically teach a couple of what we have called  
9 Mini-Defeat Autism Now Conferences where we go to a  
10 particular area of need, where there is a parent group  
11 that's asked us to come in and talk about medical  
12 problems of children with autism. And typically two  
13 or three times a year over the course of several years  
14 we will do those mini-DAN conferences, and the  
15 curriculum there is ultimately my responsibility.

16 So we do have doctors' training or actually  
17 a clinician seminar, I should be more specific, and  
18 this is intended to help clinicians who are interested  
19 in this population of children to learn about these  
20 medical problems. It needs to be expanded and one of  
21 my goals is to continue to expand upon and improve on  
22 that because in the past we've typically offered it as  
23 a one-day training session after the three days of the  
24 actual Defeat Autism Now Conference.

25 So we wanted to try to have a model where

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1 clinicians could actually get mentoring as opposed to  
2 just primarily a lecture model, although we do try to  
3 make it interactive with lab interpretation, et  
4 cetera. So this past fall, in September, I bought a  
5 building and renovated it, and named it after Dr.  
6 Barney Rimland, who was the founder of the Autism  
7 Research Institute, and Dr. Rimland, the Court may not  
8 know, was the one who debunked the myth that  
9 refrigerator mothers caused autism. That was a  
10 prevalent theory actually for quite a number of years,  
11 and he questioned that orthodoxy back in the mid-  
12 sixties.

13 So we have always had an intellectual slant  
14 where we ask questions and look for answers, and he  
15 was a very good role model for showing us how to do  
16 that.

17 So the Rimland Center, in addition to  
18 standing for Barney Rimland, stands for research  
19 initiatives mentoring, linking autism networks and  
20 discoveries because our model is a very collaborative  
21 model, one where scientists talk to clinicians, and  
22 clinicians talk to the parents, and we all learn from  
23 one another, and I wanted the name of my center to  
24 reflect that kind of a philosophy in terms of trying  
25 to bring care to these children.

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1           So, we have clinicians who come from around  
2           the country and overseas to spend time with the center  
3           and observe us taking these very careful histories of  
4           children with autism and related disorders, and by  
5           doing that we hope that they can develop what we  
6           believe is the biggest skill set that we bring here,  
7           which is this very finely honed skill where we listen  
8           to the parents and take these very careful histories,  
9           and that is not at all anything out of the mainstream  
10          because when I was a pediatrician training at the  
11          University of Virginia, which is a very conservative  
12          medical school, Dr. Birdsong was one of the founders  
13          of that department, and every year at the conference  
14          that we had in his honor they would always say listen  
15          to the mama and look at the baby. So that is the  
16          essence of my medical education there, and that is  
17          what I believe that we at Defeat Autism Now have been  
18          able to bring to the table as we face what we believe  
19          to be something that's happened to a generation of  
20          children.

21          Q       Dr. Mumper, I want to ask you, in your role  
22          as a clinician and particularly in your role as the  
23          medical director of DAN and your work at the Rimland  
24          Center, do you regularly read or review the peer-  
25          reviewed literature?

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1           A     I do. That has to be part of my job. I try  
2     to read as much as I can. I maintain long  
3     bibliographies. I will say that reading it and trying  
4     to understand the essence of it is easier for me than  
5     being able to recall details.

6                     And Tom, while I am here, for the record I  
7     would like to make one comment about the use of the  
8     word "DAN". There is another organization called DAN,  
9     which is the Divers Alert Network, and I am actually a  
10    former scuba diver, and I used to go to their  
11    meetings, and we have DAN with an exclamation point,  
12    but they will sue us if we say they are DAN because  
13    they think that they, you know, had that name first,  
14    which I think they did.

15                    So we are trying very hard to always say  
16    Defeat Autism Now. So for the people that are  
17    listening and especially if any of them are the  
18    divers, you know, I'm trying very hard to say Defeat  
19    Autism Now with a question mark, and not to imply that  
20    we are representing the Divers Alert Network.

21            Q     And I will certainly do the same thing when  
22    I describe the name of the organization.

23                    So in your roles in different organizations,  
24    do you regularly review the peer-reviewed literature  
25    and is that something that is shared with other

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1 clinicians within the network?

2 A Yes. We maintain that. We have a woman who  
3 actually has Asperger's Syndrome who has hyperlexia,  
4 and she reads all day, and she maintains a very  
5 extensive bibliography for us, and we have posted  
6 relatively recently, I think, on the Autism Research  
7 Institute website her latest update of those articles.

8 So when I am trying to decide about the  
9 curriculum for the doctors' training, obviously, you  
10 know, there are thousands of medical articles printed  
11 every year, we have to sift through those and try to  
12 decide about the ones that we think are most  
13 informative to carry out what we're trying to do, so I  
14 do end up reading a lot of them.

15 I would say more important to me though is  
16 the networking opportunities I've had because over the  
17 past few years, like when Autism Speaks was having a  
18 gut-consensus meeting at Harvard, I was invited to go  
19 to that, and represent the clinicians and the  
20 children, and be in the room with other developmental  
21 pediatricians and the gastroneurologists from Harvard  
22 and elsewhere, and those types of meetings are very  
23 helpful to me.

24 I was invited to present at the National  
25 Institute of Environmental Health Sciences back in

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1 August of 2005, when they were looking into potential  
2 environmental aspects of autism. So at that meeting I  
3 actually got to meet some of the scientists who papers  
4 we had been reading, and Dr. Burbacher, for example,  
5 was at that meeting, so I got to see him actually  
6 present his work, and then had the opportunity to talk  
7 to him about it.

8 I had already met Dr. James and Dr. Deth at  
9 that point, and Boyd Haley was at that meeting, and so  
10 a number of scientists who I have come to respect  
11 greatly. I love the fact that I had the opportunity  
12 to ask them about their work.

13 Q Do you attend other conferences and even  
14 international conferences, AMFAR, or organizations  
15 like that devoted to the study of autism?

16 A You know, I have actually never been to  
17 AMFAR yet. I would be there today if not for this  
18 meeting because we have a research project that we  
19 would have liked to have presented there.

20 But most of the meetings that I attend are  
21 somehow related to Autism Now. I have been invited to  
22 present twice at neruotoxicology meetings, but it was  
23 about autism from a clinical perspective, bringing  
24 that into the neurotoxicologic realm.

25 I do get invited to speak a lot overseas.

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1 In the last -- I can't remember the timing exactly,  
2 but a couple of years I've been invited to be the main  
3 presenter at the Mind Foundation in Sydney, Australia.  
4 I've been to Japan. I've been to Italy several times.  
5 I was invited to do a whole day training for  
6 clinicians in Poland, for example, and I have had  
7 other opportunities that I've had to turn down just  
8 because of the travel schedule to do to South Africa,  
9 for example, for the World Autism Organization.

10 The other thing I valued is getting to know  
11 some of the people at NIH, and for example, when Sue  
12 Swedo was getting ready to do a chelation study for  
13 NIH she actually called me as medical director for ARI  
14 to try to tap into some of the information that some  
15 of the Defeat Autism Now doctors might have about how  
16 to design a safe study, because NIH was very  
17 interested in looking at that, but obviously they  
18 wanted to make sure that they did it in a way that was  
19 good for the kids.

20 And so recently I just got back from --  
21 Martha Herbert, who is a pediatric neurologist at  
22 Harvard had asked me to go to a New Paradigms in  
23 Autism meeting, which was a think tank that was held  
24 at Commonweal in California. So once again there is  
25 this model of having this interaction between the



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1 research scientists and the clinicians, and how we are  
2 trying to both inform one another's work.

3 Q In terms of informing of work that you are  
4 doing as a clinician, and not just as a personal  
5 clinician with a private practice, but in your role in  
6 ARI and Autism Now, what do you see the role -- you  
7 described earlier as sort of the parent input. You  
8 described a couple of times parent input.

9 Can you be more specific about how that fits  
10 into the model of the collaborative project that  
11 you're describing?

12 A Yes. First of all, we emphasize in our  
13 clinician trainings that you have to listen to the  
14 parents. In pediatrics, typically about 95 percent of  
15 your diagnosis is going to come from the history that  
16 you get. So, we teach the value of respecting the  
17 parents' observations.

18 Secondly, we typically have parents on all  
19 kinds of our organization strategies. For example, we  
20 have a DAN executive council that makes decisions  
21 about what topics and what speakers should be invited  
22 to our conferences, and we have several parents on  
23 that council.

24 We try to keep it actually kind of a balance  
25 between M.D. physicians, research clinicians, or

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1 research scientists I should say, and parents, so it's  
2 kind of a triangulation so that everyone has that kind  
3 of input.

4 We also work very closely with parent  
5 advocacy organizations, especially the ones that work  
6 on teaching either coping strategies or medical  
7 strategies to parents, like for example there is a  
8 group called Talk about Curing Autism, and they have a  
9 network of mothers who have been through various types  
10 of treatment of their children who had medical  
11 problems and noticed improvements in their autism  
12 symptoms. So they now, even though they are very busy  
13 with their own children, have reached out to teach  
14 other mothers how to do that. So, we have a very  
15 healthy respect for the intelligence of our parents.

16 They come into my office with huge notebooks  
17 organized. They have tracked their children's  
18 symptoms so carefully. This is something I have not  
19 seen in other aspects of pediatrics. You know, even  
20 for example in diabetes, which is a chronic illness,  
21 you know, many times you ask them to bring their blood  
22 sugar records back, and you know, you get the story  
23 that, you know, they forgot it, or you will see it all  
24 written in in the same pen, you know. It juts doesn't  
25 approach -- not that there aren't very many mothers

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1 and fathers of diabetic children who do keep good  
2 records. What I'm saying as a generalization. This  
3 set of parents is extraordinary. They tend to be very  
4 intelligent. They tend to be extraordinarily  
5 dedicated to their children's well being.

6 Q Now, you've mentioned the recordkeeping the  
7 parents do. Does that sort of recordkeeping that they  
8 show up with when they come in your door, does that  
9 recordkeeping continue typically during their course  
10 of care and treatment with either yourself or other  
11 practitioners in your network?

12 A We find that they typically get three-ring  
13 binders, and put the lab work in, and add the doctors'  
14 notes. In our practice, we make it a standard  
15 practice to at the end of every visit I give them my  
16 written note with my recommendations, and it includes  
17 all the history that I took so that if I misunderstood  
18 them or we got, you know, Uncle George having the  
19 heart attack instead of Uncle Steve, you know, they  
20 can always come back and change those kinds of  
21 details.

22 We feel that the devil is in the details  
23 here; that if you don't take a very thorough and  
24 careful history, you're going to miss some of the  
25 clues that might as a synergistic way of looking at

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1 the case, as a way of looking at systems coming  
2 together. If you don't take a careful history, you  
3 might miss some of those things.

4 Q And then moving forth from history, let's  
5 say a parent came into you and you're treating that  
6 child. During the course of that child's treatment  
7 from you, do the parents keep records of that ongoing,  
8 not just when they come in?

9 A Yes. Yes.

10 Q But ongoing.

11 A Yes, that's what I am saying. We give them  
12 every note that we generate from our office, and they  
13 put it in the notebook and then, you know, we go back  
14 the next time and are able to refer back to that.

15 Q And are the parents keeping track of results  
16 generally of the care and treatment that are being  
17 provided by you and other doctors that you work with?

18 A Yes. We have a practice of making copies of  
19 the lab results that we get so that the parent gets  
20 the CBC results, the chemistry screen results, the  
21 still testing, the biopsy reports from endoscopy, you  
22 know, usually the pictures from endoscopy in my  
23 community because the gastroneurologist is very good  
24 about giving the glossy pictures as well as the biopsy  
25 results.

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1           So it is a model that is very much  
2           collaborative. It's not an authoritarian model where,  
3           you know, the person comes in and tells the doctor  
4           their story, and then the doctor tells them what to  
5           do, and then they leave and either do it or don't do  
6           it. You know, we encourage people to tell us did we  
7           recommend something that you weren't able to follow  
8           through with, you know. Was your child not able to  
9           take this medicine because of the bad taste? So it's  
10          very much a give and take kind of a model.

11          Q       Is there any rough estimate as to how many  
12          children nationwide, for example, are treating with  
13          clinicians who are associated with Defeat Autism Now?  
14          I mean, hundreds or thousands?

15          A       You know, I really don't know how to  
16          estimate that, Tom. I'm so sorry. There are more  
17          children that would like to have care than can get  
18          care, I will tell you that, because most Defeat Autism  
19          Now practitioners have waiting lists of six months to  
20          a year and a half. So we are not meeting the need,  
21          but we don't have a good tracking system for how many  
22          people a doctor or a nurse practitioner sees after  
23          they go to one of our conferences.

24          Q       How many children are you seeing right now  
25          in your clinic?

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1           A     You know, I don't even know that answer. I  
2     know that I have over 2,000 medical records, and I  
3     estimate that between four and five hundred of those  
4     are autism cases. I do know that in the last -- we  
5     did a review of our last year of autism cases for  
6     this, and we identified 156 or 158, I can't remember  
7     exactly, in that one-year period that I had ongoing  
8     management of.

9           Q     So it sounds like even though autism is  
10    clearly a focus of your professional and personal  
11    interest, it's at some level a minority of patients  
12    within your clinic, within your practice?

13          A     Right. It's the majority of my time  
14    because, you know, we allocate these one-and-two-hour  
15    visits to them. So if you look at my schedule, there  
16    is big chunks where the kids have autism spectrum  
17    disorders, but if you look at the overall numbers, I  
18    still see a lot of general pediatric patients, more so  
19    than the autism patients.

20          Q     Now, we talked a little bit about some of  
21    the clinical aspects of the Defeat Autism Now  
22    collective, so to speak, and the parent involvement.  
23    I would like to ask you a little bit about the  
24    research.

25                   Does Defeat Autism Now or ARI conduct

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1 original research with the idea of publication or do  
2 they support it financially for other people? Explain  
3 that to the Special Master the research scientist end  
4 of things.

5 A Right. The sort of motto of Autism Research  
6 Institute for research is that we want research that  
7 makes a difference. So we tend to fund clinically-  
8 oriented or bench science that is likely to inform a  
9 treatment option. So we have historically not  
10 invested in classic genetics research. We invested in  
11 research for kids with medical problems,  
12 gastroenteritis or kids that have methylation  
13 abnormalities, or children that have oxidative stress.

14 So, we don't have a huge budget. I'm not  
15 positive about the numbers because I don't sit on that  
16 board, but I think we only have about \$500,000 a year  
17 in the budget, so it's relatively a small amount of  
18 money to do research.

19 So the NIH level of research that's multi-  
20 million, you know, we are not going to get there. But  
21 as an example we were one of the ones who initially  
22 funded Jill James' early work, and she went --

23 Q Excuse me. We, the ARI?

24 A The ARI, and she initially looked at some  
25 very important metabolic markers in the methionine

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1 pathway of methylation and transulferation. Then she  
2 took it a step farther with our funding and looked at  
3 some genetic polymorphisms, so called SNPs, single  
4 nucleotide polymorphisms, and because she is such a  
5 careful scientist and writes things well and doesn't  
6 overstate them, she now has gotten a \$5 million NIH  
7 grant, and she is going to be able to do many, many  
8 more children so that we will be able to show a lot  
9 more significance.

10 So I tend to think of a lot of our research  
11 is kind of seed, to get some momentum going in a  
12 promising area, and then I think, as we work on our  
13 collaborations with NIH and the American Academy of  
14 Pediatrics, the hope is that as they get to know as  
15 that we will be able to utilize that mechanism for  
16 funding too.

17 Q Now, Dr. Mumper, I want to focus on a couple  
18 of issues that have been raised, at least early on  
19 here in Dr. Rust's report. Have you reviewed his  
20 expert report?

21 A I have.

22 Q And not in a case-specific, but more talking  
23 in general --

24 A Okay.

25 Q -- about your approach to these particular



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1 cases. Do you recall having looked at his report when  
2 it came out?

3 A Yes. Yes.

4 Q One of just the general issues in that  
5 report is that you personally as a clinician and other  
6 clinicians in the collaborative effort that Defeat  
7 Autism Now represents, that you all are doing work  
8 without the benefit of controlled clinical trials;  
9 that is, whether it's the full-blown placebo, double-  
10 blind crossover study or just more straightforward  
11 case controlled clinical trials, and that's a concrete  
12 criticism that's been leveled against you and your  
13 practice network.

14 How did you respond to that again just in  
15 general?

16 A First of all, I would say that I trained at  
17 the University of Virginia, and so they taught me many  
18 things I know about how to practice medicine, and did  
19 choose me to be chief resident there.

20 Secondly, I try not to take what Dr. Rust  
21 says personally, and think that he is addressing this  
22 from his perspective as a neurologist in an academic  
23 institution.

24 There is no alternative biochemistry. You  
25 know, it's ironic that I now look at biochemist charts

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1 to try to figure out how to help my kids. That is not  
2 something a typical pediatrician would do, but I think  
3 it reflects some intellectual curiosity, and one of  
4 the reasons that I'm interested in that is that Bill  
5 Wilson who is this wonderful metabolic geneticist at  
6 UVA was one of my mentors, and, frankly, I didn't  
7 particularly like biochemistry early on, but Bill made  
8 it understandable. I traveled with him to do genetics  
9 clinics down in Southwest Virginia, so I would have  
10 two and three hours in the car with him, and to have  
11 relationships with those kinds of people where you can  
12 ask them questions is very valuable.

13 I still consider myself a mainstream  
14 pediatrician. It has been personally somewhat -- I  
15 guess the word would probably be hurt that UVA is not  
16 as interested in my work as I would hope they would  
17 be, and I think that some of that is a result of  
18 miscommunications or misunderstandings in which -- for  
19 example, methyl B12 is probably a very good example.

20 If all you knew about me was that I was a  
21 pediatrician who used to be smart but was now giving  
22 kids with autism MB12 shots, you know, you might be  
23 tempted to say, you know, oh, you know, we have no  
24 evidence that those supplements help, and one reason  
25 you might say that is because you don't read the

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1 nutritional biochemistry literature.

2 And so Jill James' article that showed very  
3 clearly that if you do that, you do improve markers,  
4 was published in the American Journal of Nutritional  
5 Biochemistry in December 2004.

6 So my pediatric colleagues would not be  
7 expected to read that. Dr. Rust would not be expected  
8 to read that. If he called me and asked me about it,  
9 you know, I would be happy to refer him to that.

10 Another thing I would like to say is that I  
11 do refer patients to Dr. Rust. He is a neurologist.  
12 He is a network for a lot of my patients, and so I  
13 respect his opinions about how to treat seizures and,  
14 you know, difficult neurological problems, and seizure  
15 medications, you know, areas far beyond my expertise.

16 I will tell you that my patients tell me  
17 that when they go to the university the history is  
18 typically taken by a resident, and that is consistent  
19 with what I would expect, and then the attending comes  
20 into the room to work more on the disposition.

21 So I would like to make the argument that my  
22 area of expertise in this arena is my ability to  
23 listen to the parents and take a really good history,  
24 and I think that both the quantitative and qualitative  
25 aspects of history taking probably differ between my

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1 clinic model and Dr. Rust's busy neurology clinic  
2 where he is an attending working with residents.

3 Q And you mentioned the specific example of  
4 the B12 and addressing what you perceive is a  
5 biomedical need. You are able to cite specifically to  
6 scientific literature in support of that.

7 How would you respond to the criticism, not  
8 even from Dr. Rust in particular, but criticisms out  
9 there? To be honest, the criticisms are out there  
10 beyond Dr. Rust's report. How would you respond to  
11 the criticism that there are therapies that you  
12 recommend and in fact use in your clinical practice  
13 that might not find specific support in a peer-  
14 reviewed published scientific journal article? How do  
15 you respond to that?

16 A I would acknowledge it forthright up front.  
17 The fact is we look at individuality of the patient as  
18 our clinical approach, and one of our concerns is that  
19 in children with autism they are a very heterogeneous  
20 population. That means that there may be many  
21 different things that may have led kids down this  
22 pathway that ultimately lead to these behavioral  
23 symptoms that we call autism.

24 So if anyone does a study where they put a  
25 bunch of kids that have methylation problems, and

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1 maybe two kids that have the GI kind of pancreatic  
2 insufficiency that would benefit from secretin, and  
3 then they put a bunch of classic autism kids who maybe  
4 had chromosomal abnormalities, and then they put in a  
5 few others where it's totally unknown any kind of  
6 potential causes for those kids, and try to test and  
7 intervention in a classic placebo-controlled, double-  
8 blind fashion.

9 That is going to be doomed to failure, and  
10 we keep saying this, we keep saying that we need  
11 biomarkers. We keep saying that we need subtypes.

12 So we would like to advocate, and I've  
13 talked to the American Academy of Pediatrics about  
14 this, we were invited to talk to the president, the  
15 executive director, the upcoming president, the head  
16 of mental health for the AAP, and we were saying we  
17 would like to look at other research models like there  
18 is something called multiple baseline single subject  
19 designs, and this has been used a lot in autism from a  
20 behavioral standpoint.

21 The idea is you do a lot of measurements on  
22 a single child, and then you do an intervention, and  
23 then you pick your outcome measures and you figure out  
24 if it made a difference or not. Did they get better?  
25 Did they get worse? Did it make no change?

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1           That, I think, would inform the science  
2           because we would be looking at the individual child  
3           and trying to design interventions that fit their  
4           biochemistry, or their pattern of illness, or their,  
5           you know, MRI markers, or their incidence of seizures,  
6           you know, whatever it is that makes that kid's type of  
7           autism a little bit different from the kid down the  
8           street. That's what we need to pay attention to.

9           Q       And as you do more of that work, I'm  
10          assuming something but tell me if it's right, that as  
11          you do that sort of work you're getting results back  
12          and those results inform that project and the  
13          direction of any future projects, is that fair to say?

14          A       Right. So one of the hopes would be if we  
15          can identify some biomarkers and do some of the  
16          initial studies on single subjects, then we can help  
17          the Sue Swedos of the world pick out a subtype.

18                 For example, right now NIH is doing a study  
19          trying to look specifically at regressive autism. So  
20          what can we bring to that if we have any biomarkers or  
21          pathology that we have found seems to be associated  
22          with that.

23                 You know, we are very good at generating  
24          hypotheses because we have the clinical cases, and the  
25          parents tell us their stories. We can't be expected

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1 with a \$500,000 budget per year and all of us seeing  
2 patients, you know, four or five days a well to be  
3 able to do clinical research of the calibre that needs  
4 to be in order to ultimately answer these questions.

5 So I think we play a very vital role in  
6 sorting out the questions, helping to identify the  
7 subgroups, and then giving our information freely to  
8 the people that can do the bigger studies the more  
9 traditional ways.

10 Q And in doing this clinical work, again  
11 without having clinical trials and case control  
12 studies to track, what do you do and what does the  
13 network of collaborators that you work with do to  
14 monitor the efficacy as well as the safety of the  
15 therapies that you're not just recommending but using  
16 on the children that you treat? How do you monitor  
17 that?

18 A A couple of things come to mind. One of the  
19 things we've been doing for many years is asking  
20 parents to report to our website. So with the up  
21 front knowledge that this is a motivated subset of  
22 people and that there may be inherent parental bias  
23 and all of the limitations of that data, nonetheless  
24 we've got data from over 25,000 parents now over many  
25 years, and you can certainly use that data to see

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1 certain trends emerge.

2           Some of the trends that have emerged as that  
3 parents tell us their kids are medically sick, and  
4 that's something that traditionally has been denied by  
5 the medical establishment, when parents numerous times  
6 have come to my office and reported that they told the  
7 doctor that their kid had abdominal pain, or explosive  
8 diarrhea, and they were pat on the shoulder and sent  
9 away and say, oh, that's just because your child is  
10 autistic.

11           Now tell me what it is about a behavioral  
12 symptom, you know, that would cause that, and that  
13 would doom a parent to just accept that that's the way  
14 that's going to be.

15           Another thing the parents have told us is  
16 that one of the most effective interventions for them  
17 is melatonin. Melatonin is used to help kids sleep,  
18 and initially we thought maybe that was the reason  
19 that they liked it, but it turns out upon further  
20 examination melatonin is actually a superb  
21 antioxidant. So that information that they gave us  
22 doesn't tell us which way it was work, but it helps us  
23 think about the mechanisms.

24           Then one of the things that pulled me very  
25 reluctantly, frankly, into the area of chelation was



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1 that that was the thing that parents identified on our  
2 list as the number one thing that helped their kids.  
3 I didn't want to chelate kids for mercury, you know.  
4 I was trained in a conservative medical school, and I  
5 didn't want to be branded as some kind of maverick  
6 fringe doctor in Lynchburg, Virginia, which is also  
7 very conservative.

8 But at some point when you see a cohesive  
9 story that seems to make sense to you, you know, you  
10 have to, I think, follow the science and try to help  
11 your patient. You know, we have always believed that  
12 our biggest obligation is to the parent, and the child  
13 that we are trying to take care of.

14 So that's one way, long-winded answer, about  
15 how we use parents to help.

16 Q This is an important opportunity so as long  
17 as the answers are the Special Masters need to hear it  
18 and it needs to be in the record.

19 A Okay.

20 Q I don't want to cut you off, but don't  
21 apologize for the length of the answer. This is your  
22 opportunity.

23 A So the second thing we do, and this is one  
24 of the roles that I probably like the most about being  
25 medical director at ARI, is to organize the think

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1 tanks, and we try to have a culture at our think tanks  
2 where everyone is respected and we use it as the  
3 brainstorming model. So we want people to be able to  
4 present their data and talk about problems, side  
5 effects, things that aren't working well as well as  
6 things that are working well.

7 We actually find that we learn a lot more  
8 sometimes about the things that we tried that didn't  
9 work because sometimes if you start teasing that out  
10 you can try to figure out what the mechanism was.

11 So we share information. We read each  
12 other's papers before they are published. We have  
13 been able to through the think tank to get tied into  
14 some university programs for autism like, for example,  
15 the autism treatment network is a consortium of about  
16 six different university places that are doing autism  
17 research, and they invited us to come to their initial  
18 planning meeting, and Margaret Bauman gave us the  
19 opportunity to have input into the types of issues  
20 they were going to initially study, and we really  
21 wanted to study gut and metabolic, and the third thing  
22 they picked was sleep, which is also important, but we  
23 had really advocated for the first two.

24 So, it's that kind of interaction that is, I  
25 think, moving science forward even though we're not

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1 doing double-blind, placebo-controlled clinical  
2 trials.

3 Q And even though not every intervention that  
4 you are recommending can point to a specific piece of  
5 peer-reviewed scientific literature in support.

6 A That may well be true. I will say a lot of  
7 what we do initially with kids is to try to ensure  
8 basic nutrition, and this has always amazed me because  
9 we are all taught to take a diet history, and the  
10 first couple of years I did that with my autism  
11 patients I'll tell you what the history was. It was  
12 chicken nuggets, french fries, macaroni and cheese,  
13 something crunchy, and then probably something sweet,  
14 and we got that over and over again.

15 Yet when I would send a patient to the Kluge  
16 Center at UVA with that kind of diet history, and I  
17 had suggested a multiple vitamin and some Omega 3  
18 essential fatty acids, you know, somehow I thought  
19 that was very reasonable because, you know, basic  
20 nutrition would teach us that five food is not enough  
21 to give the kids what they need.

22 But I don't have, you know, a footnote for  
23 every supplement that we try to use to correct these  
24 very basic deficiencies. I'm sure they are out there  
25 in the nutrition literature, but anyway, that's just

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1 an example of it.

2 Q No, I appreciate that.

3 Now, I appreciate the general background you  
4 have been able to provide both to your experience and  
5 to your practice, and the methods you bring to your  
6 practice. I'm going to start focusing not yet on the  
7 specifics of either one of the boys' cases here, but  
8 start talking about the central issues in each of  
9 those cases.

10 A Okay.

11 Q Obviously, for both Jordan King and William  
12 Mead a very big issue is regressive autism, and the  
13 belief that the parents have expressed that both of  
14 these boys developed normally and regressed, and I  
15 want you to comment on the regressive autism issue.  
16 It's discussed in your report, but maybe start off by  
17 describing what you believe regressive autism is.

18 A When I look at a child's history, I look for  
19 very clear and very specific milestones, and we  
20 typically get the pediatricians' records so that we  
21 can go through and know that at the time of a  
22 particular well-baby visit two weeks, two months,  
23 fourth months, six months, 12 months.

24 The pediatrician is taught to ask questions,  
25 and at each monthly visit there are certain milestones

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1 you expect to see, and if you start seeing a pattern  
2 emerge where a child is delayed in speech, for  
3 example, or delayed in a motor skill, then you have to  
4 track that more carefully.

5 So what I look for in the general  
6 pediatric's records -- different doctors do it  
7 differently, but some have checklists where they ask  
8 the question and check off, you know, yes or no. I  
9 have an electronic record where I can get more  
10 specific about milestones if it looks like there is a  
11 problem and ask more questions. But it's crucial to  
12 know that that was contemporaneously documented.

13 I actually believe the parents, that they  
14 remember a lot of those, and they often have baby  
15 books where they recorded it, or they've got video,  
16 but there have been some reports in the literature  
17 that, especially as the kids get older, the  
18 developmental milestones fade, and I would be the  
19 first to admit that I don't remember them on my kids  
20 who are now 17 and 19, but we clearly document that  
21 normality initially.

22 Then I look for a story about a clear  
23 regression. Kids are meant to gain words and then  
24 gain more words. It may be that they gain them in a  
25 smooth fashion. It may be that it's more of a step

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1 stone mechanism, but it is not normal for them to have  
2 words and then lose the words that they previously  
3 had. So to me that is a huge red flag.

4 Similarly, typically kids go through some  
5 sequenced step from being able to lay flat, roll over,  
6 sit up, pull up, cruise, and walk. It's not really  
7 normal to learn to walk, and then only be able to  
8 crawl again. So, those are the kinds of things, the  
9 loss of skills implies to me regression.

10 Now, when I take these histories, I  
11 typically get a couple of different patterns, and I  
12 went back and looked at my last year's worth of data  
13 in the wake of Dr. Rust's report, and in my population  
14 clear regress is in 50.6 percent of the kids.

15 Now, let me say that I clearly think that's  
16 a referral bias because the people that come to my  
17 clinic have heard that if you have a child who seemed  
18 normal and then regressed maybe this person can help  
19 you. So I want to be very clear on that point that  
20 I'm not saying that that's the percentage of overall  
21 kids who regress because I see a funnel of those kids  
22 and they come to me.

23 But about 35 percent of my patients have no  
24 regression. Only about 2 percent plateaued, and then  
25 about 14.2 percent were delayed from early infancy.

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1 So, I do see these kids who are the more -- that would  
2 fit more with the classic autism. But frankly, I  
3 consider my expertise to be more in the realm of  
4 helping the kids who did have regressive autism  
5 because typically I can treat those medical problems  
6 and see that some of their autistic symptoms might  
7 improve.

8 The kids that have chromosome abnormalities  
9 or syndromes are probably better served by our  
10 genetics folks in the classic autism centers, and you  
11 know, we have excellent genetics department at UVA,  
12 and so I would defer to their expertise for those  
13 kids.

14 Q As a clinician who sees both cases of  
15 regressive autism and cases of classical autism, as  
16 you've described, do you see a striking difference  
17 between the presentation that those patients have?

18 A I do. Classic autism, I'm more likely to  
19 find problems very early on. In classic autism, I  
20 will frequently get the story that the mom with babe  
21 in arms, you know, very early on in the first few  
22 weeks felt like the child didn't look at her, you  
23 know, even within the first few weeks.

24 A normal infant should find the most  
25 fascinating thing in the world to be his mother's

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1 eyes, and so they typically will look at the mother  
2 and that emerges in the first few weeks.

3 So you will get these stories from these  
4 heartbroken mothers who said, you know, my baby never  
5 really looked at me. They always looked vacant. Or  
6 we'll hear, yeah, the doctor was worried, you know, he  
7 mentioned at the four-month checkup that my baby  
8 wasn't rolling over, and you know, it didn't happen  
9 until like five and a half months, and then at the  
10 six-month checkup he said he wasn't sitting yet, and  
11 that didn't happen until he was nine months old.

12 So my clinical experiences that I'm more  
13 likely to get more of an early encephalopathic picture  
14 where something was contributing to this developmental  
15 delay. So that to me is a very clearly different  
16 story from the most frequent story that I hear.

17 Q Okay. So in zeroing in on the issues that  
18 are subject to your report, and ultimately your  
19 opinion, we discussed briefly autistic regression. I  
20 then want to move on and talk about another of the  
21 central issues here which is that thimerosal-  
22 containing vaccines might be related to the appearance  
23 of autistic symptoms, and specifically autistic  
24 regression.

25 A Okay.



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1 Q Can you describe what it was initially and  
2 when it was initially that you came to the belief that  
3 thimerosal-containing vaccines might even possibly be  
4 associated with some of these disorders?

5 A I remember it very clearly because it was  
6 when I read Richard Deth's work about thimerosal's  
7 effect on cells, or on enzymes, I'm sorry. In his  
8 early work, he was looking at methionine synthase, and  
9 methionine synthase is this very crucial enzyme in the  
10 methylation pathway, and if that does not function  
11 well you are not able to make normal  
12 neurotransmitters. Those would be things like  
13 serotonin which keeps you from getting depressed, or  
14 melatonin which ought to help you sleep, or dopamine  
15 which is the thing that kids with ADHD need help with  
16 and the medications like Ritalin and Aderol are trying  
17 to fast-forward that biochemistry for them.

18 When you don't methylate, you also can't  
19 make normal cellular membranes. This was really scary  
20 to me because in terms of getting a cell to do its job  
21 you need to take some kind of messenger, whether it's  
22 a hormone or a drug or a neurotransmitter, and somehow  
23 navigate a way to get it across that cell membrane,  
24 and sometimes it's by an active process, sometimes  
25 it's by a facilitated process, sometimes it by ion

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1 diffusion. There are lots of different ways that can  
2 happen.

3 But you have to have these nice, fatty bi-  
4 layer cells in order to have that happen. So if you  
5 can't methylate, it's going to have a negative impact  
6 on that, and Dr. Deth talked very eloquently about how  
7 not having these fluid membranes can interfere with  
8 all kinds of neurologic function.

9 The other thing that really scared me was  
10 that if you can't methylate that means you are losing  
11 the ability to regulate your genes, to turn your genes  
12 off or no, to tell yourselves you better start making  
13 that protein or you better quit taking that protein,  
14 and this is one of the scariest things for me because  
15 it raises this realm of epigenetic effects where some  
16 environmental exposure can actually change the way  
17 that our cells are functioning on this very  
18 fundamental level related to gene expression.

19 So, one of the things that he showed was  
20 that in his cell model, which we frequently will use a  
21 test tube or cell plate model to look at mechanism,  
22 that thimerosal would have an adverse effect on this  
23 enzyme, and in his studies essentially totally wiped  
24 it out; that it was very consistent with, to me, a lot  
25 of the things I was seeing as a clinician.

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1           And some of his earlier work also related to  
2 something called methylene tetrahydrofolate reductase,  
3 which I hadn't thought about since I was in medical  
4 school, but as we looked at these kids and looked at  
5 downstream effects from this methylation abnormality  
6 it seemed to be a really big deal to me.

7           Then another thing I hadn't thought about  
8 since medical school was glutathione, and one of the  
9 things that the methylation pathway that Dr. Deth  
10 talked about is meant to do is to get you to a point  
11 where you can make glutathione, and glutathione does  
12 so many things. It is the major intercellular  
13 antioxidant, so it's the thing you need to have in  
14 order to provide a good redox status in your cells, as  
15 Dr. Deth talked about, and Jill James' work has shown  
16 that, you know, thimerosal is one of the things that  
17 has an adverse impact on that.

18           Another thing that you need glutathione for  
19 is to regenerate your gut epithelium, and one of the  
20 first things I noticed about these kids was the almost  
21 universal in my clinic, 92 percent of my kids have  
22 significant gut symptoms according to the parents  
23 compared to only about 20 percent of my regular  
24 patients, and glutathione is involved in that.

25           Another thing it's really involved in is

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1 immune regulation of T-cells, which has a lot of  
2 implications for fighting infections, for taking care  
3 of your response to allergies. It's very important  
4 for mitochondrial function, and mitochondria are very  
5 important because of their energy-producing  
6 capabilities. The other thing that it does is it's  
7 like the gateway to this huge detoxification pathway.

8 So, that cycle, to me, seemed to be  
9 something that if you interfered with it, it would  
10 have a lot of bad downstream consequence. And so when  
11 I first learned about that, I developed this interest  
12 in trying to follow that further because both Jill  
13 James and Dick Deth seemed to be such careful  
14 scientists and I trusted the way that they explained  
15 it and it made sense given my clinical experience.

16 Q And to be clear in terms of the expertise  
17 you bring here, you described some immune system  
18 issues related to methylation. You're not an  
19 immunologist, and you have published or done original  
20 research in immunology.

21 A No. Not at all. So when I am talking about  
22 what I understand about things like, you know,  
23 methylation or immunology or neurology, you know, I  
24 get input from my colleagues there, but I do in no way  
25 want to represent myself as having any kind of

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1 specialized training, fellowship training in any of  
2 those specialty areas. But general pediatricians need  
3 to know these things because it impacts their  
4 patients.

5 Q And from the contents of your expert report  
6 you've explicitly rely, in fact, on the testimony or  
7 the reports of Dr. Aposhian, the toxicologist, and Dr.  
8 Deth, correct?

9 A That is absolutely correct.

10 Q So in terms of toxicological mechanisms,  
11 methylation mechanisms, and whatever model of  
12 causation arises from there, you're rely on those  
13 folks, correct?

14 A That is absolutely correct.

15 Q Okay. Now, you wrote and filed your report  
16 in this case back in November, correct?

17 A Yes.

18 Q As you know, Dr. Marcel Kinsbourne, in early  
19 April this year, filed a report on general causation.  
20 That came after your report.

21 A Right.

22 Q In the time between Dr. Marcel Kinsbourne's  
23 report being filed and being here today have you had a  
24 chance to read and review his report?

25 A Yes, I did.

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1 Q Have you had an opportunity to read and  
2 review some of the underlying literature in his  
3 report?

4 A yes.

5 Q Did you have an opportunity to attend his  
6 testimony and listen to him live?

7 A Yes, I did.

8 Q Based on all of that, would it be your  
9 testimony today that your expert opinion in these  
10 cases is informed by Dr. Kinsbourne's work and the  
11 underlying science that he cites to?

12 A Yes. I think it expands upon our work and  
13 integrates some of the issues regarding  
14 neuroinflammation, the Vargas work, the Pardo paper,  
15 some of the neuropathology in a very integrated way.  
16 So I do feel that it is consistent with my synthesis  
17 of these cases.

18 Q Now we're going to talk specifically about  
19 other things that you might have relied on to form  
20 your opinions in both of these cases, and in each case  
21 you do offer an individual expert opinion supporting  
22 the proposition that thimerosal-containing vaccines  
23 substantially cause the autistic symptoms, correct?

24 A Substantially contribute to, I think --

25 Q I think that was the language.

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1 A -- is what I said.

2 A Yes.

3 Q And let me ask you this way. Before getting  
4 to that statement, I want you to describe as  
5 thoroughly as you can, without repeating the general  
6 qualifications and skills, what specifically you were  
7 relying on in order to evaluate these claims and reach  
8 the opinions that you did.

9 A Well, it was my understanding that my  
10 expertise in pediatrics was being recognized, and so I  
11 basically tried to look at the cases with clinical  
12 judgment, and go through the histories as if I were  
13 taking them and generate hypotheses about what might  
14 be potentially contributing to the picture that I saw.

15 Then I looked at various aspects of their  
16 histories and tried to provide some but not exhaustive  
17 footnotes about some of the literature that had tied  
18 together -- the published literature that had tied  
19 together the clinical presentations with the published  
20 science.

21 Q And we're talking what you reviewed. You're  
22 referring specifically, just so that it's clear on the  
23 record, you received the full sets of medical records  
24 of both Jordan King and William Mead, the same set of  
25 records that Respondent and the Special Masters have

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1 seen and reviewed?

2 A Right. That's correct.

3 Q So you read and reviewed and analyzed those

4 --

5 A Right.

6 Q -- to generate your reports?

7 A Yes.

8 Q You just mentioned that you checked  
9 citations to the scientific literature. You did that?

10 A And I also -- I was sent a number of video  
11 disks last Thursday that I reviewed. The way that I  
12 decided to do that was to -- I actually wrote this  
13 report last fall late, and hadn't looked at the dates  
14 of the children's birthdays since then.

15 So when I looked at the videos, I  
16 deliberately didn't look at their birth dates because  
17 I wanted to view them in a way to see if I could  
18 notice anything different without the prior prejudice  
19 that it was going to happen on a certain date because  
20 that was what was in the medical records.

21 So, I looked at the videos and noticed some  
22 signs of normal development and then things that  
23 seemed to be abnormal, and only later when Mr. Mead  
24 testified went back and put the dates in.

25 Q Now, upon that review of the records, did it



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1 change your opinion at all that both of these boys in  
2 fact exhibited the symptoms of regressive autism? Did  
3 it change your opinion?

4 A No. I think that the videos reflect that  
5 they are the subset, as yet to be defined in terms of  
6 percentage, that had clearly normal development, and  
7 then fell apart with a clear regression.

8 Q If you had seen something in the video  
9 records that indicated to you as a clinician that they  
10 were not truly regressive cases, is that something  
11 that you would bring to the attention of the Court and  
12 perhaps change your opinion?

13 A Yes, I would feel that I would have the  
14 responsibility to do that.

15 Q So your review of the video compared to the  
16 medical records, you find them consistent?

17 A And I also find them consistent with the  
18 testimony of the parents.

19 Q So you were able to hear the full testimony  
20 of Ms. King and Mr. Mead?

21 A That's correct.

22 Q Anything else that you read or reviewed or  
23 considered in forming your opinions in these cases?

24 A I went back and looked at some of my  
25 clinical experiences, some analogous cases when I was

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1 looking at how that might inform my opinion. I don't  
2 recall other things.

3 Q Okay. Now, in your report you do offer an  
4 opinion.

5 MR. POWERS: I should just alert the Special  
6 Masters we're now going to move more into the case-  
7 specific discussion, and we will be leading off with  
8 William Mead's case, so that's where we are going to  
9 begin the individualized review here, and we will need  
10 to give Dr. Mumper just a moment to pull the proper  
11 materials in front of her.

12 THE WITNESS: Yes.

13 (Pause.)

14 THE WITNESS: Okay, I think I have them.

15 BY MR. POWERS:

16 Q Now, in William Mead's case before we walk  
17 through the specifics, can you tell the Court what  
18 your medical opinion is as a clinician relying on the  
19 information that you've already described? What is  
20 your opinion as to the potential cause of William  
21 Mead's regressive autism?

22 A I want to look at what I actually said  
23 because I think the language is very important here.  
24 The way that I wrote it was, "In my best medical  
25 judgment based on my understanding of the medical

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1 literature, some of which is cited, and by my clinical  
2 experience, William is a child whose  
3 neurodevelopmental problems were exacerbated by  
4 mercury exposure in vaccines."

5 Q Now, you have since reviewed Dr.  
6 Kinsbourne's expert report. Would you agree that  
7 thimerosal-containing vaccines, as he has stated it,  
8 belong on the list of possible environmental causes of  
9 regressive autism in instances where other known  
10 causes have been ruled out?

11 A That's correct.

12 Q In William Mead's case, can you describe  
13 what other causes you ruled out in evaluating the  
14 presentation of his symptoms, again before we talk  
15 through the symptoms specifically?

16 A Okay. I think it was mentioned actually by  
17 one of the parents that one of the things you first  
18 want to do is to make sure that they can hear, because  
19 you can't expect a child to continue to develop  
20 language if they can't hear. So very appropriately a  
21 hearing screen was done, and that was recorded.

22 It's also very important to look for  
23 metabolic problems of the kind that, for example, in  
24 classic genetics high lactates and pyruvates are  
25 frequently looked at to give evidence for things like

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1 mitochondrial dysfunction or disorders of carbohydrate  
2 metabolism. So that was done in him and that was  
3 normal.

4 By physical exam early on, you typically are  
5 able to rule out genetic dysmorphic syndromes, things  
6 like Crater Willy, Creata Shat, Cornelia Delang,  
7 Angelun Syndrom, William Syndrom. You know, this is a  
8 baby who was a Pottery Barn model. He was very, very  
9 cute and dysmorphic in any way. So you rule out the  
10 genetic component of it.

11 We would look for environmental toxins not  
12 just thimerosal-containing vaccines, but things that  
13 might have even been present before birth. You would  
14 look for whether the mother got terbutaline, which has  
15 been associated, whether the mother got dilantin,  
16 which is valproic acid, well know to be associated  
17 with autism. You would look at whether she had  
18 rubella during her pregnancy. There is some evidence  
19 that other viral illnesses during pregnancy can be  
20 associated with autism. So you look at the whole  
21 clinical picture, and try to consistently either make  
22 one thing less likely or one thing more likely as you  
23 do your workup.

24 So there is a very broad differential  
25 diagnosis, you know. Selective mutism is one of the

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1 things that you would think about when a child all of  
2 a sudden doesn't talk. Both of these kids were pretty  
3 early for childhood schizophrenia, but that should be  
4 on the differential diagnosis list.

5 If they were kids that had bad Apgars,  
6 meaning birth trauma, or had lots of prematurity, you  
7 could argue that there might be some type of brain  
8 damage from birth that would make them ultimately  
9 develop autism, but none of those things seems to be  
10 in the picture for William.

11 So as you go through the sort of classic  
12 differential diagnosis, as he went from being a normal  
13 kid to being a child with autistic features, and then  
14 even more narrowly part of the subset that clearly  
15 seemed normal first and then regressed as opposed to  
16 the more classic kid, you keep narrowing down your  
17 list of things that could be possible, and then you  
18 get to a point where you are generating hypotheses and  
19 then looking for them to be confirmed by lab data.

20 Q And is that the process that you were  
21 engaged in with your review of William's records?

22 A Yes.

23 Q And also the review of the videos that were  
24 provided?

25 A That's correct.

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1 Q So in looking at the medical records if  
2 you're going to diagnose a regression autism the first  
3 requirement really is a period of normal development,  
4 is that correct?

5 A That is correct.

6 Q Can you describe what you saw in terms of  
7 his early development?

8 A Well, we have, I think, records which the  
9 Special Masters have of all his well-baby visits, and  
10 so to cut to the chase, throughout the first year of  
11 life normal milestones were recorded, and there were  
12 not any red flag raised about abnormal development.

13 When the child went to the University of  
14 Oregon actually, the medical specialists there  
15 actually acknowledged that William didn't appear to  
16 have classic autism, but was clearly developmentally  
17 normal initially and then regressed, and so that's a  
18 very learned developmentalist who is making the  
19 observation that this is not the classic kind of  
20 autism.

21 Q As you reviewed William's well-baby records  
22 from his visits to the pediatrician, do you recall  
23 specifically the first time that the pediatrician  
24 noted something that you would then assign to the  
25 differential diagnosis of autism? Do you recall that?

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1           A     I believe it was at the two-year checkup if  
2     I'm not mistaking it with the other child.

3           Q     Yes. Because the records are extensive and  
4     we don't want it to be a memory quiz, we're going to  
5     put that up on the screen, and this will be  
6     Petitioner's Exhibit 1. Let me make sure I'm reading  
7     this correctly. Okay, Exhibit 1, page 22.

8                     Dr. Mumper, that exhibit is now up on the  
9     screen in front of you. If you would look at that for  
10    a moment, could you describe for the Special Masters  
11    and for the record what it is that you see there?

12           A     Yeah, this is a very typical pediatric  
13    template for well-baby visits. It provides an  
14    opportunity for the nurses to write down any concerns  
15    that the parents have. There are routine areas that  
16    we question that have relevance on the ongoing health  
17    of the child, like how well they are sleeping, what  
18    their diet is like, and whether or not they are in day  
19    care and therefore being exposed to a lot of  
20    infections, the toileting situation, any concerning  
21    behaviors.

22                     Then we typically ask about development and  
23    we try to do that in several different quadrants. We  
24    look at motor development both from a fine motor  
25    standpoint which involves things like whether the

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1 child can use a spoon or manipulate objects, to gross  
2 motor skills like running or climbing stairs to  
3 interpersonal skills and self-help skills like being  
4 able to dress himself, and looking at language.

5 So here we see under the language milestone  
6 -- actually, Scott, is it possible to blow that up a  
7 little bit for me?

8 Q And again for the record so it's clear in  
9 the transcript, what we're going to zoom in on is the  
10 left-hand side of the record. Almost exactly halfway  
11 down there is a category called "Development", and  
12 it's highlighted on the screen.

13 A Yes. So at that point typically -- in terms  
14 of language development you typically expect a child  
15 around 15 months of age to have somewhere in the  
16 neighborhood of eight to 15 words, and then one of the  
17 landmarks we look for is that a child should put two  
18 words together by 18 months.

19 There is obviously a wide range of normal,  
20 and many normal children don't put two words together  
21 until 20 months or age or even later, and as long as  
22 other issues are okay you might feel reassured to  
23 watch that child.

24 But she makes a note here that he's not  
25 combining two words, and then more importantly down in



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1 the lower right-hand quadrant she says --

2 Q Excuse me. And this is in a section called  
3 "Plan"?

4 A "Plan", yes. She says, "no words", and no  
5 words is only normal really in the first year of life.  
6 So here we've got a child who is essentially a year  
7 behind at this point. Not pointing or knowing body  
8 parts, typically kids are able to point at one year,  
9 and typically they start knowing body parts somewhere  
10 around 15 to 18 months. You know, show me your nose,  
11 show me your belly button.

12 So I take this documentation as very clear  
13 evidence that this is a child that has a very  
14 significant language delay, and taking that into  
15 context with what the record also showed about his  
16 earlier language development, that is in my mind a  
17 clear language regression.

18 Q And pulling that record down right now, what  
19 is it that you do recall from the earlier medical  
20 records about his language development?

21 A Again, I'm going to get the two children  
22 mixed up because I've heard both stories very close  
23 together. My memory is that the milestones were  
24 normal. From looking at the video, I recall one time  
25 when he actually said "Hi, daddy" as he walked toward

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1 the camcorder. That was a normal expected milestone.

2 And his one-year language milestones were in  
3 the normal range, but right now I'm not remembering  
4 the exact words that he had.

5 I want to make the point that in children  
6 speech and language isn't just words. We look at  
7 speech and language all through the first year. Cooining  
8 should start in the three-to-four-to-five-month range.  
9 Then we look for babbling, these consonant sounds, and  
10 then we look for jargonizing, which is the sort of  
11 talking in a foreign language stuff. And so it's not  
12 just a matter of looking at the words at one year  
13 versus the words at two years. It's looking at the  
14 fact that the cooining and the razzing and the babbling  
15 and the jargonizing preceded that in the normal way.

16 Q In your general review of the medical  
17 records up to this point, up to his two-year visit,  
18 were there any indications of any developmental  
19 delays, deficiencies, or developmental problems of any  
20 sort noted in the contemporaneous medical records?

21 A I did not see any documentation of any kind  
22 of developmental problems. He did have some other  
23 problems that were more medical problems.

24 Q And what were those medical problems? And  
25 it actually will be a two-part question because I'll

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1 ask you to describe medical problems but also why you  
2 find them significant, and ask you only to refer to  
3 issues that you do find significant to your medical  
4 opinion here.

5 A Okay. The first thing that caught my eye  
6 was the fact that around three months of age he  
7 developed reactive airway disease. Reactive airway  
8 disease is a kind of code word we use for a child that  
9 wheezes because when a child first wheezes it could be  
10 from bronchiolitis, it could be from early onset  
11 asthma, it could be from some environmental component  
12 like cigarette smoke in the family. So we hesitate to  
13 diagnose asthma unless the child has wheezed at least  
14 three times, and part of that is because has some  
15 long-term impact on their health record and ability to  
16 get insurance and all of that.

17 But that tells me that he is a child who is  
18 exhibiting either just a normal course of  
19 bronchiolitis or potentially is going to declare  
20 himself over time as a child who is going to go on to  
21 develop asthma.

22 The second thing I noticed was that around  
23 five months of age he started develop many ear and  
24 respiratory infections, and this is a very consistent  
25 history that we get when we're talking to the parents

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1 of autistic children, and it's actually been  
2 documented in the formal publications, that there is a  
3 higher incidence of otitis media in children with  
4 autism, although I don't recall the exact reference.

5 So, when we see that kind of story, I start  
6 thinking that it's a kid who is sick, and the reason  
7 that that's important to me is because of what I've  
8 learned from my research colleagues about the impact  
9 of oxidated stress. When kids are having wheezing and  
10 therefore intermittently being hypoxic or having  
11 respiratory distress, they are by definition  
12 undergoing one of the situations that leads to  
13 oxidative stress.

14 When a child is sick and febrile and not  
15 eating or drinking well, they tend to get acidotic and  
16 that acidotic cellular biochemistry tends to make them  
17 under oxidative stress. So in our list of things that  
18 can cause oxidative stress are things like infections,  
19 or trauma, or dehydration, or toxins, or things like  
20 radiation that, you know, a child typically would not  
21 be having.

22 So when I think about the way this child was  
23 living his infancy and going in for his well-baby  
24 checks, I am concerned that he at least intermittently  
25 was undergoing oxidative stress at the time of some of

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1 his immunizations.

2 Q So that's what I was going to ask how this  
3 informs your opinion because you're certainly not  
4 arguing, I don't think, that the oxidative stress  
5 that's induced by reactive airway disease and things  
6 like that was a cause per se of his regression into  
7 autism.

8 A No, no, no. All of this is building a  
9 clinical picture. I am concerned about chronic yeast  
10 infections. It's certainly true that in the first  
11 year or so of life that many babies have yeast diaper  
12 rashes and oral thrush. What I see in my practice is  
13 that sometimes instead of clearing these typically in  
14 the first six to 12 months we have patients who get  
15 recurrences over a number of years, and it may well be  
16 true that a small percentage of people are going to do  
17 that, but it raises a question to me why.

18 You know, is there something about this  
19 child that as his immune system is being modulated  
20 over time he is not developing that ability, and the  
21 research on that I would need to leave to the  
22 immunologists, but having spoken with them, it is one  
23 of the things that is a small piece of the puzzle for  
24 me.

25 Q What other pieces of the puzzle can you

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1 identify from your review of his medical records?

2 A In terms of his?

3 Q In terms of his overall health that would  
4 contribute to your expert opinion that thimerosal-  
5 containing vaccines were a substantial contributive  
6 cause of his regression?

7 A Well, I think his father described it well  
8 the other day when he talked about the fact that  
9 William was a very sick child, and that's one of the  
10 things that we have been very adamant about getting  
11 out to the medical community. Many of these children  
12 are very sick, and they need to be treated for their  
13 medical problems and not to have them dismissed as  
14 just part of the autism.

15 Q Now, during the course of his first year of  
16 life, again from your review of the records, did  
17 William get pediatric vaccines?

18 A Yes, he did.

19 Q Did he get what you would call the full  
20 schedule of vaccines?

21 A Yes, he did. In the third page of my  
22 report, I walked through what he got and when.

23 Q Okay. And actually, if we could go ahead  
24 and just turn to the medical record itself. This  
25 would be Exhibit 1, page 3, and when it goes up on the

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1 screen like that with the bar codes, it looks quite  
2 intimidating, but we're going to zero in and look at  
3 some discrete areas.

4 If we could look up at the very upper left  
5 hand where there is highlighting on the screen.

6 Actually, again for the transcript, Dr. Mumper,  
7 Exhibit 1, page 3, is in front of you. Can you look  
8 at it and describe what you're seeing there?

9 A Yes. This is entitled William P. Mead's  
10 Immunization Record Form.

11 Q Okay. Now, if you look at that, running  
12 down in a column going down the left, there is DTaP 1,  
13 2, 3, and 4. Do you see that?

14 A Yes. And that stands for diphtheria tetanus  
15 and acellular pertussis, a very classic childhood  
16 vaccine, typically initially given at two, four and  
17 six months of age.

18 Q Based on your review of his medical records  
19 and seeing that there are dates next to the DTaPs,  
20 does it look like William Mead in fact received those  
21 shots as per the schedule?

22 A Yes.

23 Q If you look a little further down, there is  
24 a 4-12-2000 date for DTaP 4. Do you see that?

25 A Yes, and let's do a little mental math and

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1 figure out how old he was at that point. He was  
2 nearly two.

3 Q Yes.

4 A Just a couple of weeks short of his second  
5 year birthday.

6 Q Right.

7 A And so you have some latitude on the fourth  
8 DPT. Many pediatricians would give it around 18  
9 months of age, but if a child was having a lot of  
10 illnesses one might choose to defer them to a later  
11 time. So that fourth DPT was a little bit later than  
12 would traditionally be given, but certainly within the  
13 realm of reasonableness.

14 Q Okay.

15 SPECIAL MASTER CAMPBELL-SMITH: Excuse me,  
16 Mr. Powers. I do have a follow-up question with that,  
17 Dr. Mumper.

18 You have described William as a very sick  
19 child, and you have just made reference to a child who  
20 was having a lot of illnesses. What, in your  
21 experience, do you characterize as a very sick child  
22 or a child who is having a lot of illnesses?

23 THE WITNESS: Yes, that's a fair question.  
24 In my practice, I really don't like to see a child  
25 have more than three ear infections in the first



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1 couple of years of life. I think that over time  
2 compared to when I first went into pediatrics we've  
3 developed this sort of tolerance for more illness with  
4 less curiosity about working it up, and that what has  
5 happened is that, you know, the child comes in with an  
6 ear infections, gets antibiotics, then sent off.

7 Not that I'm going to suspect classic immune  
8 deficiency, that's not at all what I'm saying, but why  
9 should a healthy baby get three to six to eight ear  
10 infections in the first 18 months of life. So the  
11 sickness that I refer to is more from the chronicity  
12 and the repetitive nature.

13 Now having said that, it is certainly true  
14 that most babies will get six to eight to 10 colds the  
15 first year, and hopefully be able to handle most of  
16 them well with perhaps one or two of them resulting in  
17 an ear infection. Certainly very common for kids to  
18 get lots of viral illnesses.

19 But once he got to the point where he was no  
20 longer gaining weight and he was being perceived by  
21 the parents as chronically ill, I think we have to  
22 trust that input.

23 SPECIAL MASTER CAMPBELL-SMITH: Thank you.

24 THE WITNESS: Does that make sense?

25 SPECIAL MASTER CAMPBELL-SMITH: Thank you.

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1 BY MR. POWERS:

2 Q Now I want to draw your attention to the  
3 right-hand column of that chart and there is a  
4 highlighted area about a third of the way down on the  
5 right-hand column. That's blown up there now.

6 If you look down the left, there is Hib 1, 2  
7 3, 4.

8 A Right.

9 Q What's your understanding of what that  
10 represents?

11 A That's hemophilus influenza B, and that  
12 typically is given at two, four, and six months,  
13 typically with the booster around 15 months.

14 Q And looking at this medical record here,  
15 does it appear that William Mead in fact got the Hib  
16 on schedule, two, four and six months?

17 A That's correct.

18 Q And the fourth one he got, it looks like the  
19 same day as that DTP just before is second --

20 A Right, a little before his second birthday.

21 Q Okay. And before I move on to the next set  
22 of shots, do you have an idea of the mercury content  
23 of the thimerosal added to these particular  
24 immunizations, these Hibs?

25 A Right. The hepatitis B vaccine, which is

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1 typically given most places on the first day of birth,  
2 has 12.5 micrograms of ethyl mercury.

3 Q And we haven't gotten to the hep B, but just  
4 to go --

5 A Oh, okay.

6 Q But we will so go ahead and complete it, but  
7 I just wanted to make sure we're not confusing the  
8 record. So hepatitis B, not Hib.

9 A Right.

10 Q Hepatitis B has?

11 A 12.5. Hib has 25 micrograms, so does the  
12 DTaP.

13 Q And then let's go ahead and move down if we  
14 could in the highlighted areas. We're moving just  
15 beneath that on the right-hand column at another  
16 highlighted area. What shots do you see there?

17 A That is the hepatitis B vaccine, the initial  
18 one given in the hospital birth, and then the second  
19 one given at two months of age, and then the third one  
20 given -- we typically try to do it somewhere in the  
21 four-to-six-month range later, so that is entirely  
22 consistent with the recommended practices.

23 Q And so if one were to add up the mercury  
24 content of those various vaccines, it would be fair to  
25 say that there are eight of those shots had 25

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1 micrograms, correct?

2 A Eight, yes.

3 Q So that would be 200 micrograms.

4 A And then the hepatitis B vaccines at 12.5  
5 micrograms each is another 25 micrograms.

6 Q So that would be 237.5 micrograms just  
7 before the age of two?

8 A Did we do that math right, Tom? Two hundred  
9 plus 25 is 225.

10 Q Oh, I'm sorry.

11 A I think. Yes.

12 SPECIAL MASTER CAMPBELL-SMITH: I can do  
13 that math if you represented to me what the content  
14 is.

15 THE WITNESS: Yes. It's 187.5 by seven  
16 months of age, and then at 23 months he did another 50  
17 micrograms, so I think that actually is the 137.

18 SPECIAL MASTER CAMPBELL-SMITH: What time  
19 are you trying to get to? By two years?

20 MR. POWERS: Yes, by two years.

21 THE WITNESS: Right. Yes.

22 SPECIAL MASTER CAMPBELL-SMITH: Okay.

23 MR. POWERS: So 237.5 micrograms would be  
24 the total?

25 THE WITNESS: Okay. Great.

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1 BY MR. POWERS:

2 Q Now I want to draw your attention, it's on  
3 the DTaP just above what had been highlighted before.  
4 There is actually a DTP 5 there. Do you see that  
5 noted?

6 A I do.

7 Q So it appears that William Mead received a  
8 fifth DTP shot.

9 A The thing that's puzzling is that there  
10 wasn't a date there that I see, which I would have  
11 thought would have been recorded right next to that.

12 Q There is not a date there. Do you recall  
13 the medical record that we showed from his visit on 5-  
14 15-00? This was Exhibit 122, page 22?

15 A Right. Let me look again. Okay.

16 Q Do you recall Mr. Mead testifying that he  
17 went in, or excuse me, that William went in, after he  
18 got those shots in April that he went back in May and  
19 received what he believed was another immunization?

20 A Actually, I did hear that yesterday or  
21 whatever day it was.

22 Q As long ago as it seems, I think it was  
23 yesterday. Seeing the DTP 5 there, would it be your  
24 understanding that, and based on Mr. Mead's testimony,  
25 seeing a DTP 5 shot there with a date that looks like

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1 it might have been covered up with a sticker, and  
2 hearing his testimony, would you think it reasonable  
3 to conclude that in fact a DTP shot was given on May  
4 15, 2000?

5 A As I've said, I typically trust the parents'  
6 history. I was looking to see if I saw where the  
7 doctor ordered another shot because typically they  
8 will write that in under plan or check off something.  
9 So one other way to confirm that might be to see if  
10 there was a bill for it, which I have not done.

11 Q Okay. So if that shot was in fact  
12 administered, there would be an additional 25  
13 micrograms of mercury a couple of weeks after he got  
14 the fourth DTP?

15 A That's correct. It would seem to be like  
16 five or six weeks later, and I would like to say that  
17 that interval in itself would not be an unusual  
18 interval. When we're doing catch-up immunizations,  
19 you're advised to wait for four to six weeks, and that  
20 would be -- even though we typically wouldn't give a  
21 fifth DTP then, that interval between shots would  
22 typically be a reasonable interval. Does that make  
23 sense?

24 Q That roughly one month interval is medically  
25 reasonable?

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1 A Exactly. Right.

2 Q But it would introduce into William Mead's  
3 body another 25 micrograms of mercury?

4 A That's correct.

5 Q Now, you described the well-baby  
6 presentation, so to speak, in terms of development up  
7 until this May 15, 2000, visit. In addition to your  
8 review of the records on his well-baby development in  
9 terms of the regressive autism, what do you see in the  
10 medical record indicating the appearance of autism  
11 itself?

12 A It would seem that the first evidence would  
13 be related to the fact that the physician documented  
14 loss of words. Then they went on to get evaluations  
15 where more specific information was gotten that looked  
16 at developmental assessments, and looked for things  
17 like eye contact and stereotypic behaviors and  
18 stemming behaviors.

19 Q Okay. Do you recall a series of evaluations  
20 and diagnoses from November 2000 to January 2001 that  
21 William Mead went through?

22 A I recall that I read those, yes.

23 Q What's your recollection of what those  
24 multiple diagnoses and evaluations with William Mead  
25 concluded?

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1           A     That they concluded that he did have an  
2     autism spectrum disorder.

3           Q     In your review of the medical records, in  
4     your review of everything that you've relied on here,  
5     do you have a medical opinion as to whether William  
6     Mead suffered an autistic regression?

7           A     Yes, I think he meets the clinical picture  
8     well documented for an autistic regression.

9           Q     Do you hold that opinion to a reasonable  
10    degree of medical certainty?

11          A     Yes, I do.

12          Q     Now I want to draw your attention, moving  
13    away from William's records for just a moment, to an  
14    expert report that Dr. Rust submitted specifically  
15    addressing William's case.

16          A     Okay.

17          Q     And I honestly can't recall the exhibit --  
18    Respondent's Exhibit KK.

19          A     I have it.

20          Q     Okay. And on page 1 of that exhibit --  
21    actually, I have to keep catching myself. If you take  
22    a look at your computer screen, Dr. Mumper, what do  
23    you see there? Can you just briefly describe what's  
24    on there?

25          A     I see University of Virginia letterhead,

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1 Department of Neurology, and a report submitted to the  
2 U.S. Department of Justice from Robert Rust, M.D.

3 Q Okay. I want to draw your attention to the  
4 second full paragraph, and the first couple of full  
5 sentences, so it begins, "W.M." and W.M. is the  
6 abbreviation for William Mead here.

7 A Right.

8 Q If we could highlight beginning with that  
9 second full paragraph to the end of the sentence that  
10 has Exhibit 3 at 34. You notice that there is a  
11 comment about William Head's head circumference there.  
12 Can you describe to the Special Masters what that  
13 comment from Dr. Rust is?

14 A First, I'd like to say that measuring head  
15 circumferences is an important part of all well-baby  
16 care. We do that routinely. It's typically measured  
17 in the hospital and its subsequent well-baby checkups.

18 He says that William was born on May 5, '98.  
19 "During his first four months of life the records  
20 document an enlarged head circumference from the 50th  
21 to the 95th percentile."

22 Q And so what that means is that when he was  
23 born his head circumference was in the 50th  
24 percentile?

25 A He's saying that during the first four

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1 months of life the records document an enlarged head  
2 circumference going from the 50th to the 95th  
3 percentile.

4 Q And does he cite a particular medical record  
5 in support of that proposition?

6 A W.M. Exhibit 3 at 34.

7 Q Okay. Could we pull Exhibit 3, page 34, and  
8 put that up on the screen?

9 Dr. Mumper, what do you see on the screen?

10 A This is a growth chart from Providence St.  
11 Vincent Medical Center, and it shows that at  
12 gestational age of 39 weeks --

13 Q Excuse me. And that's when William was  
14 born, his gestational age was 39 weeks?

15 A Right, and that's considered essentially to  
16 be a term delivery.

17 Q Understood.

18 A That the head circumference was 30 -- Scott,  
19 can you help me? Is that 36 sonometers?

20 Q Yes, if we could zero in on sort of the  
21 bottom half of the chart that includes -- right there.  
22 Thank you.

23 A That the head circumference, which was  
24 measured in the nursery, placed him above the mean,  
25 close to -- about a standard deviation away from

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1 normal, so making him somewhere near the 80th  
2 percentile for his head circumference.

3 Q So not the 50th percentile but almost a full  
4 standard deviation above that?

5 A Right, which the point here I think is that  
6 this head circumference was consistent with his other  
7 measurements. He was a big baby, well proportioned  
8 with height, weight, and head circumference being in  
9 the same range.

10 Q And let's pull back if we could and look at  
11 that full page because there is some of that  
12 information here. There are another set of curves  
13 that you see above the head circumference, is that  
14 correct?

15 A Right, and that's length, and he was  
16 actually very tall for age, greater than the 95th  
17 percentile.

18 Q So his head size was somewhere in the  
19 eighties and his overall size was at the top of the  
20 chart?

21 A Right.

22 Q Do you see anything on this record to  
23 indicate that his head circumference when he was born  
24 was at the 50th percentile?

25 A No, I don't.

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1 Q Let's look back to that first page of Dr.  
2 Rust's report, please. The sentence beginning after  
3 the one that's highlighted is where I would like to  
4 pick up again. This is in the second full paragraph,  
5 and if we could remove the current highlight and begin  
6 a highlight with the words "This pattern of", and all  
7 the way to the end. Thanks.

8 So, Dr. Mumper, if you could take a moment  
9 to read that, again it's in the record, we don't want  
10 to read it aloud.

11 A Right.

12 Q Just take a moment to look at that and I'll  
13 have some questions.

14 A Okay.

15 Q What is it that your understand Dr. Rust is  
16 saying the significance of this report at 50 to 95th  
17 percentile is?

18 A I understand him to be making the case that  
19 William is a child who exhibited an early pattern of  
20 increasing head circumference such as has been  
21 described in classic Kanner autism, and this is a very  
22 reproducible kind of finding where children in the  
23 early part of their infancy start developing  
24 accelerated brain growth, which is what leads to the  
25 head growth, and that typically needs to be worked up.

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1 I agree with him completely on that point.

2 If you did indeed have a child whose head  
3 circumference was changing, you would look for things  
4 like evidence of fetal distress and evidence of  
5 hydrocephalus, and abnormalities on an MRI, or the  
6 more rare conditions he mentions like Alexander's  
7 Disease, Tay-Sachs, Canavan, which I must admit I  
8 can't remember what that one is, and Rett's Syndrome.

9 He goes on to say that William has none of  
10 those. So he seems to be using a pattern of brain  
11 growth in order to advance the hypothesis that William  
12 was autistic from birth; that he was following a  
13 classic pattern as has been well described in the  
14 literature; and that this is a pattern that's been  
15 associated with autism for a long time.

16 My problem with that is that I would  
17 interpret the same growth chart as showing a head that  
18 was very consistent with the rest of the child's body,  
19 and not making a case for this classic increasing  
20 acceleration of head growth.

21 Q Well, particularly since from the evidence  
22 that he cites in there, there is no evidence that he  
23 started off at 50 percent?

24 A That's the way that I interpret the data.  
25 That's correct.

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1 Q And would it be your experience as a  
2 clinician and a pediatrician that if you saw this  
3 presentation in a child, you would likely make a note  
4 of it in your medical records of 50 to 95 percent in  
5 their first four months of life?

6 A Yes. We typically look very carefully at  
7 anything that crosses more than one percentile.  
8 Increasing head -- I'm sorry -- one standard  
9 deviation, the correct. We look very carefully at  
10 anything that crosses one standard deviation.

11 So whether it's head circumference going up  
12 or weight going down or height going down, once you  
13 cross a standard deviation, that is a trigger for most  
14 pediatricians to either institute a workup or at least  
15 think about differential diagnoses about what might be  
16 causing that.

17 Q Do you see any evidence whatsoever in any of  
18 William Mead's medical records where his treating  
19 doctors discuss this issue, or as you describe, even  
20 note this issue?

21 A No, I do not see anywhere where his  
22 pediatrician noted changing increasing head  
23 circumferences that needed to be worked up.

24 Q Okay, thank you. You can pull that down.  
25 So, Dr. Mumper, we've discussed and you're

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1 made clear for the record that William in fact did  
2 experience an autistic regression. So now I want to  
3 move on and talk about what you see as evidence that  
4 thimerosal contained in his vaccines that were given  
5 to him might have been a contributing cause of the  
6 regression that he experienced.

7 Now, you've already described the fact that  
8 he did receive a series of thimerosal-containing  
9 vaccines per the schedule, and we've discussed the  
10 dose, correct?

11 A That's correct.

12 Q You had also mentioned his medical condition  
13 at the time he was receiving those shots. I would  
14 like for you, if you could, to explain to the Special  
15 Masters in what way, if any, would you ascribe any  
16 relationship between his overall medical condition  
17 during the time that he got his shots and the  
18 emergence of regressive autism.

19 Is there anything about his medical  
20 condition that you've discussed that might lead to the  
21 appearance of the regressive symptoms given the shot  
22 schedule?

23 A My concern is that a child who is already  
24 under oxidative stress due to illness or other factors  
25 when presented with thimerosal-containing vaccines

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1 will be depleted of the highly evolved mechanism that  
2 nature has provided us with in order to try to handle  
3 those kinds of burdens. And so in my practice we do  
4 not immunize kids when they are sick.

5 At the time that William was immunized, this  
6 was perfectly consistent with American Academy of  
7 Pediatrics' policy, and we were actually encouraged to  
8 vaccinate children when they were sick because we  
9 didn't want to get behind, and we were told to take  
10 every opportunity. So having an ear infection or  
11 being on antibiotics was not a contraindication to  
12 giving vaccines.

13 But my concern is that a child who is  
14 already sick and gets vaccines is going to be depleted  
15 in glutathione, which is the end result of oxidative  
16 stress, and therefore be robbed by the primary  
17 mechanism by which they would be expected to handle  
18 that thimerosal load.

19 SPECIAL MASTER CAMPBELL-SMITH: Pardon me,  
20 Mr. Powers.

21 Dr. Mumper, I have heard testimony regarding  
22 what is regarded as a sick child, and most  
23 pediatricians that I have heard testify to this would  
24 say they don't immunize sick children, and they  
25 characterize that a sick child that has fever above a



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1 certain amount.

2 How are you charactering that will you will  
3 not immunize a sick child?

4 THE WITNESS: Yes, I actually don't immunize  
5 children if they have upper respiratory infections.

6 SPECIAL MASTER CAMPBELL-SMITH: Active or  
7 recovering?

8 THE WITNESS: Active. I don't immunize them  
9 if they have fever. I don't immunize them when they  
10 are on antibiotics. I don't immunize them when they  
11 have diarrhea.

12 SPECIAL MASTER CAMPBELL-SMITH: Thank you.

13 BY MR. POWERS:

14 Q So, Dr. Mumper, I want to now talk about  
15 some of the lab results. You discuss them in your  
16 report. You reviewed them and ascribe particular  
17 value or significance to some of those reports in  
18 William Mead's case.

19 Do you recall from the medical records that  
20 William Mead, when he started treating with Dr. John  
21 Green in January of 2001, had a heavy metals test  
22 administered?

23 A Yes, I do.

24 Q I think you have some of the materials in  
25 front of you there. I'm going to have Exhibit 5, page

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1 5, put up on the screen, and I'll give you a moment.  
2 I know you have an awful lot of paperwork there but if  
3 you could move to that particular chart and sort of  
4 look up at me when you're ready.

5 (Pause.)

6 A Okay, I have it.

7 Q Okay. Now let's look on the screen there  
8 and refer to it. Can you describe for the Special  
9 Masters what it is that is displayed on the screen  
10 there that is page 5 of the fifth exhibit?

11 A Yes. This is a red blood cell elements test  
12 on William Mead at the age of two that was collected  
13 on January 8, 2001.

14 Q And what is your understanding of how this  
15 test was conducted?

16 A This is a blood test in which the child  
17 contributes a sample of blood that is sent to the lab,  
18 and then analyzed for essential elements, which are  
19 the ones at the top above the dark line that says  
20 "Potentially toxic elements".

21 Q In fact, it actually say "Nutrient elements"  
22 at the top.

23 A Exactly.

24 Q Okay.

25 A So it is looking at various nutrients that

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1 are very important for all of us, things like calcium,  
2 which is important for bones; magnesium, which is  
3 important for neurologic function; zinc, which has a  
4 role in over 300 different body processes; iron, which  
5 helps us build our blood, et cetera, et cetera.

6 Q Okay. And what do you see in the next  
7 headed table underneath? This is the one called  
8 "Potentially toxic elements".

9 A This is looking at elements like antimony,  
10 arsenic, cadmium, lead and mercury to try to identify  
11 the presence of these toxic elements.

12 Q Now, is this a blood test that involves a  
13 propagation agent or chelation, the use of a chelator?

14 A This is typically not done that way. This  
15 is typically just a blood test. It's not like a  
16 urine-provoked test.

17 Q Okay. Now, if you look at the top, the  
18 nutrient elements, is there anything of significance  
19 there that informs your opinion?

20 A The most significant value to me is the zinc  
21 which is around the 1.5th percentile. What that would  
22 mean is that the amount of zinc in his blood compared  
23 to the reference ranges was lower than about 98 to 99  
24 percent of people.

25 Q Why is that, if it is, is that significant

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1 to informing an opinion that thimerosal-containing  
2 vaccines contributed to his injuries?

3 A Well, this is very indirect evidence because  
4 zinc can certainly be low due to not taking it  
5 initially or having poor absorption. But one of the  
6 functions that zinc does in the body is that four  
7 molecules of zinc complex with metallothionein to help  
8 escort heavy metals -- mercury in particular -- out of  
9 the body through some complex pathways that I would  
10 leave to the toxicologists.

11 But in looking at autism patients in my  
12 clinic, one of the so-called soft signs we use as a  
13 trigger to potentially evaluate the child further for  
14 heavy metal toxicity is if they have low zinc levels,  
15 and zinc is one of the things that we typically will  
16 supplement when it's low because of its very many  
17 crucial functions, only one of which is to help with  
18 mercury excretion.

19 Q Now looking down at the potentially toxic  
20 elements category, is there anything of significance  
21 there that you would want to point out?

22 A The mercury value is 0.022 micrograms per  
23 gram with the reference range being less than 0.01,  
24 and that puts him above the 99th percentile in terms  
25 of the amount of mercury that was documented to be

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1 present in his blood.

2 Q Why is that significant to your opinion?

3 A Because mercury is a known neurotoxin and  
4 its presence in the blood in the absence of other  
5 explanations makes me concerned that this reflect his  
6 potential inability to handle thimerosal-containing  
7 vaccines.

8 Q We're now going to turn to another record.  
9 This would be Exhibit 5, page 9, and that exhibit is  
10 now up on the screen. If you could explain what that  
11 is.

12 A This is a laboratory looking at  
13 immunoglobulins. It was received on the 11th of  
14 January in '01. It is look at IgG, which is the  
15 immunoglobulin that tends to persist over time; IgA,  
16 which is in our secretions like our nose and gut; and  
17 IgM, which is the immunoglobulin that is meant to  
18 respond early on to infection.

19 Q So what fluid is being measured here?

20 A This typically would be blood.

21 Q So this is a blood test looking to find  
22 these particular components?

23 A Right.

24 Q Is there anything of significance that you  
25 would want to identify in this lab result?

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1           A     The thing that I note is that in the normal  
2     range of 800 to 1,700, William showed that he had 686  
3     micrograms -- I'm sorry. I'm having trouble reading  
4     the unit.

5           Q     Is that DL, deciliters?

6           A     Yes. Showing that he's below the lower  
7     range of normal. This does not, to me, mean that he  
8     has a severe combined immunodeficiency disease or any  
9     sort of classic, you know, put the baby in a bubble  
10    kind of immunodeficiency, but it is clearly below the  
11    normal range.

12                   Also significantly is that his IgA was below  
13    normal at 69 micrograms per deciliter, with normal  
14    being 100 to 490. The reason that I find that  
15    particularly significant is that IgA deficiency tends  
16    to be the most common immunodeficiency that we have  
17    and it's somewhere in the range of one in 600 to one  
18    in 700 people.

19                   But when we've looked at autistic children,  
20    we've seen that many of them are in the lowest  
21    quartile for IgA or have a frank IgA deficiency. So  
22    this can impact on his ability to fight respiratory  
23    infections, viruses that might potentially otherwise  
24    trigger off asthma, or ear infections.

25           Q     Let's turn to Exhibit 5, page 24, and just

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1 so the Special Masters know, we have a fair number of  
2 these to work through so I'll try to do it as  
3 efficiently as we can and use this method to get it  
4 done in a prompt way.

5 So Exhibit 5, page 24, is up on the screen.  
6 Could you explain what you see there, what the  
7 document is?

8 A This is looking at a Metametrix Laboratory  
9 assessment on the child that was looking at his  
10 nutrient status, and the thing of importance here was  
11 that it identified him as being in need of  
12 antioxidants, lipoic acid and co-enzyme Q10 were some  
13 of the specific recommendations that were made.

14 Q I need to stop you just again for the  
15 record. There are shaded blocks that have data, and  
16 the third shaded block down has a heading called  
17 "Antioxidants". Is that what you're referring to?

18 A Right.

19 Q Okay.

20 A And this is the state of labs available to  
21 Dr. Green at the time. I think it's important for us  
22 to acknowledge that the labs he had available to him  
23 in 2001, which was like four years before the Vargas  
24 paper and many years before some of the recent  
25 advances about oxidative stress and methylation

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1 biochemistry, I'm merely in pointing this out as  
2 supporting evidence that he was under oxidative  
3 stress.

4 Q And is there anything else on this page,  
5 anything about the amino acids that are significant?

6 A Well, there are a couple of amino acids that  
7 are flagged as needing supplementation. One of them  
8 is tryptophan, which is one of the precursors that  
9 helps us create melatonin and be able to sleep.

10 Q Does that have any particular significance  
11 to your opinion here?

12 A In that many children with autism have  
13 abnormalities in tryptophan pathways, yes.

14 Q Next is Exhibit 5, page 3.

15 A And this --

16 Q Just wait.

17 A Okay.

18 Q Okay. It's up on the screen. Could you  
19 describe what that is?

20 A Yes. This is what's called a provoked urine  
21 meaning that the child was given a challenged dose  
22 presumably of some kind of chelator, although I'm just  
23 now noticing that it doesn't actually mention what  
24 that is.

25 The data that they got showed that mercury



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1 came out at 21 micrograms per gram of creatinine when  
2 the reference range would have been between zero and  
3 three. That basically is a many-fold excretion in  
4 response to a chelation challenge, and the  
5 interpretation would be that that was reflecting  
6 mobilization of a body burden of mercury.

7 Q And just a quick question because it may  
8 come up in looking at some of these other results.  
9 Why is this expressed as a ratio of the compound of  
10 interest to creatinine?

11 A One of the challenging things of  
12 interpreting lab data in children with autism is that  
13 many of them have abnormal creatinines or abnormal  
14 concentration of their urine, and we therefore need to  
15 use a correction factor to allow for whether it was a  
16 dilute specimen or a very concentrated specimen in  
17 order to get a valid measurement of things like  
18 mercury. So the correction factor is built in by the  
19 lab in order to account for that.

20 Q So it's sort of a control to control for  
21 dilution that one would expect?

22 A That's a good way to explain it, yes.

23 Q Okay. Exhibit 5, page 20, is the next thing  
24 we're going to take a look at. It's up on the screen  
25 now, Doctor. Could you describe what you see there?

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1           A     Yes. This is an essential amino acids done  
2     in the plasma, which is a blood test, and it is  
3     showing me that he has low levels of a number of amino  
4     acids -- isoleucine, leucine, licine, tryptophan and  
5     valine. And ordinarily we use amino acids to build  
6     our body, and to synthesize proteins.

7                     One of the supporting findings that would  
8     suggest the possibility to consider a methylation  
9     defect is that methionine is at the low end of normal  
10    although not, frankly, low. That's the essential  
11    amino acid in the methylation pathway.

12                    The other finding that I found interesting  
13    is that he had a relatively low level of glutamine,  
14    362, with normal being 500 to 1,050. Glutamine is one  
15    of the things that has a role in maintaining normal  
16    intestinal integrity, and so is a potential avenue to  
17    do supplementation in kids that are showing GI  
18    symptoms or chronic diarrhea or inflammatory bowel  
19    symptoms.

20            Q     Would it be fair to say that this is  
21    evidence in support of the notion that he's undergoing  
22    oxidative stresses described by Dr. Deth?

23            A     I think it would be considered supporting  
24    but not conclusive evidence.

25            Q     Let's go to Exhibit 5, page 19. That's in

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1 front of the screen. Could you describe what you see  
2 there?

3 A This is a fatty acid test on plasma, and is  
4 looking at various measurements of omega 3 and omega 6  
5 fatty acids and other acid metabolism. It shows a  
6 pattern of a number of low essential fatty acids.  
7 Essential fatty acids have crucial roles in fighting  
8 inflammation. They have crucial roles in cell  
9 signaling, the type of cell signaling I was referring  
10 to before when I spoke of neurotransmitters or drugs  
11 going to the membrane of the cell, and then being  
12 transported inside to inform the cellular chemistry  
13 what to do.

14 We, anecdotally, have found supplementation  
15 with omega 3s to be a value in children with autism.  
16 There have been some publications that support that,  
17 and I tend not to order this because it always comes  
18 back low, so I tend to save the family money here, and  
19 typically do the supplementation because there are  
20 really no contraindications to supplementing with  
21 omega 3 fatty acids, for example.

22 Q And again in particular the reason to do  
23 that would be to enhance the body's ability to fight  
24 inflammation?

25 A Yes, that's correct.

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1 Q So is there any significance to this  
2 particular information to your ultimate opinion that  
3 thimerosal-containing vaccines might have contributed  
4 to his regressive autism?

5 A Well, my concern is that in this generation  
6 of children that tend to have very low essential fatty  
7 acids, that they are again not utilizing one of their  
8 inherent natural mechanisms to treat inflammation, and  
9 since our underlying concern about these children has  
10 to do with a chronic ongoing neuroinflammation we feel  
11 that they deserve every benefit to have any  
12 inflammatory interventions.

13 Q We're going to go to Exhibit 5, page 34.  
14 What is that document, Dr. Mumper?

15 A This again is a red blood cell element  
16 analysis. It's a different format from the one we  
17 looked at before. It is showing that comparing to  
18 percentiles that this child, William, at the age of  
19 three is exhibiting low levels of chromium, cooper,  
20 magnesium, manganese, molybdenum, selenium and zinc.  
21 This is one of the things that we use to safely  
22 monitor children when they are undergoing chelation so  
23 that we can replenish their essential elements, and we  
24 particularly find it useful to look a the selenium and  
25 the zinc and try to supplement those two essential

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1 elements in order to potentiate their own ability to  
2 get rid of heavy metal toxicity.

3 Q Is this a provoked or chelated test as far  
4 as you know?

5 A No. This is really a different situation in  
6 which it's just a blood test.

7 Q And down at the bottom there is a toxic  
8 elements area. Mercury is listed. There is a dark  
9 bar there indicating that mercury was in the low  
10 limit. Is that a fair reading of that?

11 A That's correct.

12 Q In an unprovoked test at this point, is that  
13 what you would expect to see?

14 A Actually this would tell me more about  
15 potential sources of ongoing exposure because when you  
16 do a provoked test the only way I'm used to  
17 interpreting that is to look at in the urine, and see  
18 if you mobilize a body burden in the urine.

19 Q So Exhibit 15, page 97, and I do want to  
20 make a note. The records do speak for themselves, but  
21 what we were looking at here were a series of records  
22 between January and June of 2001.

23 We are now looking at a new record on the  
24 screen, and there is a -- basically a year ahead. Can  
25 you describe what you see there, just what that record

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1 is?

2 A This is a urine toxic metals that was  
3 obtained in July of 2002.

4 Q So this is about one year after the last  
5 result that we looked at in the records that preceded?

6 A Right.

7 Q Okay. Can you describe what this test is  
8 designed to show?

9 A This test is designed to show the presence  
10 of toxic metals as listed in the urine.

11 Q And as a urine test, would this be a chelate  
12 or a provoked test?

13 A I do not see a provoking agent listed on the  
14 lab form.

15 Q In fact, there is a space that says,  
16 "Provoking agent" in the bottom of the middle where it  
17 says, "Specimen data"?

18 A That's correct.

19 Q And it's left blank?

20 A That's correct.

21 Q So you then look at the results in the  
22 middle. Are there any results there that are  
23 significant?

24 A One of the things that we see is that there  
25 is some lead that we are always concerned about

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1 because of the potential synergistic toxicities of  
2 lead with other agents, and also the fact that we know  
3 that lead itself is a neurotoxin. So it is showing  
4 that it is still within the reference range. It's  
5 showing that at this particular time there is no  
6 mercury showing being excreted, none detectible.

7 Q Is that an expected or unexpected finding at  
8 this point in an unprovoked test?

9 A That would be expected.

10 Q Now we're going to go to Exhibit 15, page  
11 105.

12 A And this is a blood test on William that is  
13 an ISAC panel which I have actually not ordered before  
14 but some of my colleagues use as looking for evidence  
15 of hypercoagulability and abnormalities in clotting of  
16 the blood.

17 Q What is the significance, if any, of this  
18 result to your opinion that TCVs contributed to  
19 William's injuries?

20 A I can't say that it is a strong correlation.  
21 It's just another example of an aspect of his body  
22 biochemistry that was out of whack and suggests that  
23 we continue to look for underlying mechanisms. I  
24 don't mean to imply that this is in any way a  
25 diagnostic of thimerosal toxicity.

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1 MR. POWERS: Now, I have a couple of pages  
2 that unfortunately I don't have marked. I'm going to  
3 need to take a minute, Special Master, to make sure I  
4 get the proper ones.

5 And while we do that, if I might just a  
6 schedule note. I believe that we will be able to wrap  
7 up with William's specific review here in time for the  
8 afternoon lunch break. Certainly not six or seven  
9 minutes, but I think in a reasonable time. We are  
10 pretty close to the end, and I might propose that we  
11 take that break when Respondent is finished with  
12 William's records, and then when we return resume with  
13 Jordan King if the Special Masters --

14 SPECIAL MASTER CAMPBELL-SMITH: You  
15 anticipated my question. Thank you.

16 MR. POWERS: We'll do some housekeeping, we  
17 need to do some housekeeping. Thank you.

18 BY MR. POWERS:

19 Q Okay, Dr. Mumper, we're going to bring your  
20 attention back to the records. We are on Exhibit 15,  
21 and this is page 87.

22 A Okay.

23 Q Hold on. I see you are ready to speak but  
24 let's get it up there on the screen.

25 Okay, go ahead. What do you see there?



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1           A     To me, this is a toxic element clearance  
2     profile, and it is on a urine specimen, and it is  
3     reported with the creatinine correction factor we  
4     discussed before, and it is showing that the value for  
5     mercury was 15.76 micrograms per gram of creatinine  
6     where the expected reference range would be less than  
7     2.31.

8           Q     What significance is this test result to  
9     your ultimate opinion on causation of William's case?

10          A     This shows me that he is excreting in his  
11     urine a very high level of mercury.

12          Q     And was this a provoked or chelated test?  
13     And if you can't tell from that, perhaps we should  
14     switch to Exhibit 15, page 88.

15          A     Yeah, it says, "Information regarding pre or  
16     post-provocation was not provided." I would hazard a  
17     speculation that it was a provoked specimen.

18          Q     And by the comment that information  
19     regarding pre or post was not provided, it means that  
20     the only sample that we see here is the post-  
21     provocation result, correct?

22                     You have to say your full answer.

23          A     Oh. Correct.

24          Q     Okay.

25          A     Well, actually, Tom, let me clarify that.

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1 The provocation comment is just that the information  
2 regarding pre or post was not provided. So I don't  
3 know that we can assume from that that it was post-  
4 provocation.

5 Q Okay. Is there anything else that would  
6 lead you to the conclusion that this is a post-  
7 provocation result?

8 A The fact that the mercury value was so high.  
9 You would not expect that to -- in a child where my  
10 synthesis of the case is that he for whatever reason  
11 did not seem to do a good enough job of excreting his  
12 mercury, I would not expect him on a non-provoked  
13 specimen to be able to mobilize that much mercury.

14 Q And then when we have looked at non-provoked  
15 specimens, there have been some low to zero values.

16 A Exactly.

17 Q Let's move to Exhibit 15, page 106.

18 A This is from Vitamin Diagnostics Laboratory.  
19 The director of that laboratory comes to our DAN think  
20 tanks. This is a specimen on William Mead in which  
21 he's looking at different nutrients in different  
22 compartments, looking at elements in whole blood, and  
23 finding a low zinc level; looking at elements in  
24 serum, and finding a high zinc level; and looking at  
25 the intracellular concentration, and finding a low

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1 zinc level.

2 So our concern in these kids is frequently  
3 their ability to utilize substances on an  
4 intracellular level, and we have the caveat that  
5 measuring analytes in the serum or the plasma in  
6 traditional ways might not be reflective of their  
7 actual difficulties on a cellular level.

8 Q And what's the significance of the results  
9 here, if any, to your ultimate opinion in William's  
10 case?

11 A Again, that I would use this as guidance to  
12 supplement zinc since it's important in 300 or so  
13 different reactions, many of those the types that Dr.  
14 Deth was talking about the other day, and the fact  
15 that zinc is used in heavy metal toxicity by the body  
16 as an adaptive mechanism to escort it out of the body.

17 Q Okay, Now let's look at Exhibit 15, page  
18 42. What is this a record of?

19 A This is from Massachusetts General Hospital  
20 on William Mead at the age of four, and it is a blood  
21 test looking at typical types of blood chemistries.

22 Q Now, let me interrupt you. Do you recall in  
23 the medical records and in Mr. Mead's testimony  
24 William flying to Massachusetts General Hospital? Do  
25 you recall that testimony?

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1           A     Yes.  Yes.  And he was to see Dr. Buie who  
2     works very closely with us.  He is a pediatric  
3     gastroenterologist who has done a lot of research and  
4     also endoscopies on a large population of children  
5     with autism.

6           Q     Would it be your understanding that this  
7     record and other records from Partners Healthcare  
8     System at Mass. General were generated during that  
9     visit by William?

10          A     That's correct.

11          Q     Okay.  So let's go ahead then as you were  
12     about to do and describe what you see on this page.

13          A     The first thing that caught my attention was  
14     the fact that his plasma carbon dioxide was low.  You  
15     will see that the measurement is 22, when the normal  
16     would have been 24 to 30 milimoles per liter.

17                     This is a very frequently used analyte to  
18     help us decide about a child's level of illness.  We  
19     use it to assess them for dehydration.  We use it to  
20     assess for when their level of toxicity indirectly,  
21     and when it is low that implies that they are  
22     experiencing metabolic acidosis which is a potentially  
23     chronic stressor in the cell.

24          Q     Any other information on here that you find  
25     significant?

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1           A     The other thing that I think is significant  
2     is that his total protein was 5.5, with the normal  
3     range being 6 to 8 grams per deciliter, and his  
4     albumin was 2.8, with the normal range being 3.1 to  
5     4.3 grams per deciliter.

6                     That implies potentially that he has had  
7     some chronic protein malabsorption over time, or  
8     potentially that he might have significant liver  
9     pathology. The reason that I think it is more likely  
10    to be related to poor protein absorption is that if  
11    you look at his liver analyte, which include total  
12    bilirubin, alkaline phosphatase, and SGPT and SGOT,  
13    they are all well within the normal range.

14           Q     And what is the significance of these  
15    findings to your ultimate opinion, if any? How do  
16    they inform your opinion in this case?

17           A     It tells me that even though at this time,  
18    which is 2003, this child had been getting a heroic  
19    effort targeted towards supplementing him  
20    nutritionally, that he was still evidencing protein  
21    malabsorption, and it would be consistent with the  
22    father's perception that he was like a malnourished  
23    child.

24           Q     Let's look at Exhibit 15, page 51. That  
25    page is on the screen now. If you could explain what

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1 that is.

2 A This also was done at Massachusetts General  
3 Hospital. It's a chemistry report as a result of  
4 looking at pancreatic enzymes. This is an area in  
5 which Dr. Buie and his colleague have done a fair  
6 amount of work and it was -- actually, this is another  
7 case of ARI-sponsored research. We were the ones that  
8 funded their initial studies that demonstrated low  
9 levels of disaccharidases and isomaltose in children  
10 with autism.

11 This shows that when he initially did the  
12 first value, that he showed that -- and this was pre-  
13 injection of secretin -- that he essentially had no  
14 trypsin, amylase, lipase and his chymotrypsin was in  
15 the normal range.

16 The reason that this is very important is  
17 that his trypsin should have been 55.4 and it was 1.  
18 His amylase was zero and his lipase was very low. So  
19 it tells me that he does not have normally functioning  
20 digestive enzymes that would be expected to help him  
21 digest things like protein and carbohydrates and fats.

22 Q How is this test performed? How was this --

23 A This was actually done during endoscopy.

24 Q Okay.

25 A The child is sedated and Dr. Buie would have

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1 put a tube down his esophagus, through the stomach,  
2 and then they also come up from below if they are  
3 doing a colonoscopy, and he would have looked at the  
4 area around the pancreas and measured the digestive  
5 enzymes in a technique that I'm not anymore familiar  
6 with than that.

7 Q Okay.

8 A Although I've seen it done.

9 Q Now the next page to look at would be  
10 Exhibit 15, page 52.

11 A So this similarly was done at Massachusetts  
12 General Hospital by Dr. Buie during an endoscopy, and  
13 showed that after he injected secretin, which is  
14 injected in order to provoke, if you will, the  
15 pancreas to put out digestive enzymes, that William  
16 had a very robust response, and his trypsin went from  
17 virtually non-detectible to 153.8 micrograms per  
18 milliliter per minute. His amylase went up to 97.6,  
19 which is well above the 32 that he was hoping for, and  
20 that his lipase went to 236 micrograms per milliliter  
21 per minute, normal was to go above the 146.

22 So this is a great example of a situation in  
23 which for a specific child an intervention like  
24 secretin might be very valuable. You may recall that  
25 when the sort of big study was done that we were

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1 concerned had not good selection criteria for the  
2 patients that went into the study, such that there was  
3 a very heterogenous population. The results of that  
4 study showed that a few kids got dramatic results,  
5 most kids didn't get much of a result, and then a few  
6 kids didn't seem to be any better. But when they  
7 averaged the findings, it came out as a negative  
8 study.

9 What we would like to work toward is studies  
10 in which we recognize that there may be subsets of  
11 kids who have these clearly demonstrable problems that  
12 we need to address from a medical standpoint.

13 And so on the basis of this test on this  
14 child, I would argue that it was a very rational and  
15 moral imperative type of decision that John Green then  
16 address his digestive problems.

17 SPECIAL MASTER VOWELL: May I interrupt here  
18 for just a moment.

19 Dr. Mumper, looking at the exhibit that's on  
20 your screen, the trypsin levels, the measurement  
21 appears to be different. We have an MM/ML/MIN on the  
22 reference range portion, and we have a UM/ML/MIN on  
23 the actual results. Are those equivalent?

24 THE WITNESS: No. That's a very good point.  
25 The trypsin result at the bottom is nanomotors per



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1 milliliter per minute, and the finding at the top is  
2 micromoles per mill per minute. So would it be fair  
3 to have us do that math and make a judgment about that  
4 after?

5 I did acknowledge that it seems that they  
6 are different measurements, so I may have  
7 misinterpreted that.

8 SPECIAL MASTER VOWELL: Dr. Mumper, I would  
9 also reference the previous sample which has the same  
10 apparent disconnect between the actual results and the  
11 reference range measurement levels. I will defer to  
12 my colleagues on whether we need you to do the math.

13 SPECIAL MASTER CAMPBELL-SMITH: If you would  
14 like to do that, to do a comparison and to make a  
15 comment on that, Dr. Mumper, we can certainly  
16 entertain that. That could be one of the lunchtime  
17 activities.

18 THE WITNESS: Okay.

19 MR. POWERS: And then back on page 51, there  
20 are a few computations to do because some of those  
21 readings were zero, so with the zero value I'm  
22 assuming, Special Master --

23 THE WITNESS: Yes, it only applies to the  
24 trypsin.

25 SPECIAL MASTER VOWELL: It only applies to

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1 the trypsin, apparently.

2 THE WITNESS: Right. Okay. I think for now  
3 I will let the testimony about amylase and lipase  
4 going from lower than reference range to higher than  
5 reference range after secretin stand.

6 BY MR. POWERS:

7 Q Now we're looking at Exhibit 15, page 122.

8 A Right.

9 Q And we're about to look at it on the screen.  
10 There you go. What do you see there?

11 A This also was done at Mass. General  
12 Hospital. This is a plasma amino acids. It's a  
13 complete panel quantitative.

14 Typically the way that amino acids are used,  
15 and organic acids, is to look for patterns diagnostic  
16 of metabolic disorders, typically in-born errors of  
17 metabolism. And the interpretation from the lab was  
18 that a number of amino acids were low, but the pattern  
19 is not diagnostic, and I agree with that assessment in  
20 terms of this not showing any particular in-born error  
21 of metabolism.

22 The way that we would typically use some of  
23 these values that are particularly low, like perhaps  
24 the asparagine, the presistine, and to a lesser  
25 extent because it's not particular low, the

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1 phenylalanine, is to raise the issue in the context of  
2 our interpretation of the child's oxidative stress and  
3 intercellular biochemistry as indirect inferential  
4 evidence of difficulty with converting one of those  
5 substrats to another due to factors that aren't  
6 identified by looking at this specimen.

7 Q And how might this inform your overall  
8 opinion that TCVs contributed to William's injuries?

9 A In a way that given the science available  
10 back then is consistent with but not in any way  
11 diagnostic of.

12 Q Of?

13 A Of thimerosal damage.

14 Q Let's look at Exhibit 15, page 123.

15 A Yes, I think that's just the second page of  
16 the previous report, Tom, with no informative  
17 findings.

18 Q So there is nothing on this page that's of  
19 significance to your opinion?

20 A No.

21 Q Okay. And we have another couple that do  
22 not have exhibit numbers. Indulge a minute or two  
23 just to get those stamped.

24 (Pause.)

25 Okay, we're going to go to Exhibit 15, page

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1 120.

2 A I think we'll be able to move through these  
3 fairly quickly because these are urine toxic metals at  
4 various points in time, showing that with a provoking  
5 agent, which is DMPS, which is a chelating agent that  
6 Dr. Green used probably because of its relative  
7 specificity for being helpful in mercury toxicity,  
8 that William demonstrated an elevated mercury  
9 excretion after DMPS.

10 Q And what date was this test administered,  
11 the one that you see on the screen there?

12 A February 10, 2003.

13 Q What do you see on this page that is of  
14 significance to your opinion?

15 A That the mercury is in the elevated range  
16 and that it was a post-provocation specimen with DMPS.

17 Q Let's go to Exhibit 15, page 118. What's  
18 the date on this document and what is this document?

19 A This is the same urine toxic metals, date  
20 received 12-6-04, although date collected is absent.  
21 This is showing that with DMPS as a post-provocative  
22 urine that there is the presence of elevated lead and  
23 mercury within the reference range.

24 Q Now, I notice that if one compares the last  
25 two exhibits, in the first one, if we could put page

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1 120 back up, and maybe even side by side, if we look  
2 at the mercury levels on page 120 and the levels on  
3 118, if we could zero in on the mercury and lead  
4 across both. Scott, if you can do that. So look at  
5 them from one to the other, is it fair to say that the  
6 amounts of each metal coming out at these different  
7 tests are different metal to metal, but also the  
8 ratios of lead to mercury are different?

9 Can you describe how that might be?

10 A Well, over the course of time when children  
11 mobilize mercury or lead or any other toxic elements  
12 there is not, at least as best we can detect, a clear  
13 linear progression of how they are going to excrete  
14 the metal, and we are very curious about this because  
15 we are the first to admit that sometimes they seem to  
16 be excreting a huge amount of mercury when we can't  
17 really explain what intervention mobilized that.  
18 Other times we're using a very targeted intervention  
19 like DMPS and they don't seem to be mobilizing it.

20 The one pattern that we have seen and  
21 documented in our think tanks is that, in general, we  
22 have to mobilize lead in addition to mobilizing  
23 mercury in order to get good mercury excretions. So  
24 some of us, even though the parents, because of all  
25 the publicity are very interested in going after the

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1 mercury, we are very concerned also about the lead,  
2 and typically will use the traditional chelator for  
3 lead toxicity, which is DMSA, at least to some extent  
4 in trying to mobilize these toxic metal burdens.

5 Q Okay. And I ask that question because we  
6 have another couple of tests like this as you implied  
7 a moment ago.

8 SPECIAL MASTER CAMPBELL-SMITH: Mr. Powers,  
9 let me interrupt just one second.

10 On Exhibit 15 at page 120, Dr. Mumper, it  
11 says at the bottom of the document under "specimen  
12 data," the date collected 2-10-2003, and the date  
13 completed and received appears to be a year later.

14 THE WITNESS: Yeah, I think that has to be a  
15 typo. So you raise a good point. Was this really  
16 done in 2003 or 2004? So we can't be sure of the  
17 date.

18 SPECIAL MASTER CAMPBELL-SMITH: Would that  
19 make a difference?

20 THE WITNESS: Not really because the point  
21 of showing these serially is to show that there is  
22 variable excretion, and not a standard pattern. So  
23 whether it's 2003-2004, assuming that at both times  
24 the child was continuing to be treated, it would not  
25 really make a difference.

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1 SPECIAL MASTER CAMPBELL-SMITH: Thank you.

2 MR. POWERS: And Special Master, at the top  
3 of the page it indicates at least that his age is five  
4 years old if that's any guidance for his calendar.

5 SPECIAL MASTER CAMPBELL-SMITH: Thank you.

6 THE WITNESS: So that would potentially make  
7 it a 2004 specimen, right?

8 MR. POWERS: Excuse me. 2003.

9 SPECIAL MASTER CAMPBELL-SMITH: Yes, 2003.  
10 He was born in '98.

11 MR. POWERS: That's correct, Special Master,  
12 1998 of May, May 1998, and moving forward it's 2003.  
13 It's more likely that this is a 2003 specimen as a  
14 five-year-old.

15 THE WITNESS: But Tom, wouldn't he turn five  
16 in --

17 SPECIAL MASTER CAMPBELL-SMITH: May.

18 THE WITNESS: -- 2004. In May. So he is  
19 really --

20 SPECIAL MASTER CAMPBELL-SMITH: May 15 --  
21 May 10th. Was it May 15th? Okay. May 15th of 2003.

22 MR. POWERS: Correct.

23 SPECIAL MASTER CAMPBELL-SMITH: Okay.

24 BY MR. POWERS:

25 Q So now we're looking at Exhibit 15, page

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1 116. Similar document to what you discussed before,  
2 that's correct?

3 A Correct. Post-provocation with DMPS showing  
4 excretion of both lead and mercury.

5 Q And then Exhibit 15, page 114?

6 A Showing elevated excretion of lead and  
7 mercury within the reference range there.

8 Q And finally, Exhibit 15 at page 112.

9 A Very elevated lead, or at least at the cusp  
10 between elevated and very elevated, and very little  
11 mercury being excreted, well, within the reference  
12 range, and that is a provoked specimen with DMPS.

13 Q So, Dr. Mumper, that concludes the review of  
14 the tests that you had identified in support of your  
15 opinion. In summary, can you describe to the Special  
16 Masters what this collection of lab results and your  
17 interpretation of those results informs your opinion  
18 on causation in William Mead's case?

19 A The lab results that were available back  
20 then the most compelling evidence I would say was the  
21 demonstration that with chelating agents William was  
22 able to mobilize and excrete large amounts of mercury  
23 in his urine.

24 The other data I presented with regards to  
25 his nutrient status, his zinc status, his amino acids,



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1 I would regard as evidence that is consistent with the  
2 idea that he was undernutritional deficiencies and  
3 oxidative stress, and that is consistent with but not  
4 diagnostic of anything related to mercury per se.

5 I would say that the pre and post-  
6 provocation with secretin demonstrate, at least for  
7 two enzymes, the amylase and the lipase, that he had  
8 very poor pancreatic enzyme function.

9 Q So this evidence that you believe supports  
10 the proposition that William Mead more likely than not  
11 suffered thimerosal-containing vaccine injuries  
12 resulting in regressive autism?

13 A Contributing to regressive autism, yes.

14 MR. POWERS: No further questions.

15 SPECIAL MASTER CAMPBELL-SMITH: Thank you.  
16 I have on my laptop here, it's now 1:25, and my  
17 thought is that we would take a lunch break for an  
18 hour and come back and then we will turn to Jordan  
19 King's questioning, reserving any rights to follow up  
20 with questions, Dr. Mumper, specific to William Mead  
21 following Respondent's cross-examination.

22 MR. POWERS: Thank you.

23 SPECIAL MASTER CAMPBELL-SMITH: Thank you.

24 MR. POWERS: Back at 2:30, Special Master?

25 SPECIAL MASTER CAMPBELL-SMITH: That sounds

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1 good. We are in recess.

2 MR. POWERS: Thank you.

3 (Whereupon, at 1:20 p.m., the hearing in the  
4 above-entitled matter was recessed, to resume at 2:30  
5 p.m. this same day, Thursday, May 15, 2008.)

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1           And specifically, we're looking at Exhibit  
2           15, page 51, and Exhibit 15, page 52. And the  
3           question was that the trypsin reference range looked  
4           as it's printed is expressed in nanomolers per  
5           milliter per minute, and every other value of interest  
6           is in micromolers.

7           And doing the math, the 55.4 nanamoler  
8           reference range for trypsin, in fact, it's 554  
9           micromoler, and that would be the same, since it's the  
10          reference range on both of those pages of the exhibit,  
11          that is, page 51 and 52, so that's the raw number.

12          It means then, of course, that the trypsin  
13          reading above is even more dramatically low, and this  
14          is purely a guess, but given that discrepancy and how  
15          everything else in reference range and in the measured  
16          substance of this is in micromolers, the suspicion is  
17          that there is a typo, but interesting math  
18          nonetheless, and it does give us a dramatically  
19          different number, but even if it's a typo, it doesn't  
20          affect the result.

21                 SPECIAL MASTER VOWELL: So you don't have  
22                 the math excuse for becoming a lawyer.

23                         (Laughter.)

24                 MR. POWERS: You know, I do. It's Mr.  
25                 Williams that did them math. He's our go-to guy.

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1 BY MR. POWERS:

2 Q So having cleared up the Mass. General  
3 Hospital typographic error or math conversion, I do  
4 want to get back to now talking about the important  
5 issues in the case here, and the case we are speaking  
6 about now is the case of Jordan King.

7 A Yes.

8 Q We spent a good deal of time earlier this  
9 morning, Dr. Mumper, going through your skills, your  
10 experience, your background, your qualifications. One  
11 of the benefits of the omnibus in general, and in  
12 particular here today is that in Jordan King's case we  
13 do not have to repeat that testimony. That record  
14 made earlier followed by William Mead's case-specific  
15 discussion is all part of the record in Jordan King's  
16 case, so we are not going to revisit those issues.

17 A Perfect.

18 Q I do want to focus though specifically on  
19 his case file and your report there, and I do want to  
20 ask you some foundational questions.

21 First, Dr. Mumper, what did you rely on in  
22 preparing your expert report in arriving at your  
23 opinion last fall, fall of 2007?

24 A I received the complete medical records  
25 which I reviewed. I looked at relevant medical

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1 literature; looked at my clinical experience as I  
2 would analyze his case; and then last Thursday I had  
3 the opportunity to view a series of video tapes on CD.

4 Q And also back in preparing the November  
5 report, did you rely on the expert reports of any  
6 other experts on the Petitioner's side of this case?

7 A I had the epidemiology report, the  
8 toxicology report by Dr. Deth. I did not have Dr.  
9 Kinsbourne's report at that time.

10 Q Since you've generated your report and  
11 opinion in November and you're appearing here today,  
12 what additional materials, if any, have you reviewed  
13 and relied on in arriving at your testimony today?

14 A Re-reviewing the records as well as being  
15 able to correlate it with hearing the parents' story  
16 firsthand.

17 Q And video review?

18 A And video review, yeah.

19 Q And as was the case with William Mead's  
20 instance, did you review Dr. Kinsbourne's report?

21 A Yes.

22 Q And review some of the underlying science  
23 cited in his report?

24 A Right, and some of that crosses with some  
25 that I cited with regards to the Vargas papers, and so

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1 again feel that his opinion, which I highly value,  
2 only adds more meat to my original opinion.

3 Q And in Jordan King's case, have you arrived  
4 at an opinion on case-specific causation in his  
5 specific case as you did in William Mead's? Have you  
6 arrived at an opinion?

7 A Yes.

8 Q Is that an opinion that you hold to a  
9 reasonable degree of medical certainty?

10 A Yes.

11 Q Could you tell the Special Masters what that  
12 opinion is?

13 A In my best medical judgment based on  
14 clinical experience and understanding of the medical  
15 literature, Jordan is a child whose neurodevelopmental  
16 problems were exacerbated by mercury exposure in  
17 vaccines.

18 Q That was the opinion that you expressed back  
19 in November, and is that the opinion that you hold  
20 today?

21 A It is.

22 Q Okay. So let's go ahead and bring our  
23 attention to the facts of Jordan King's medical  
24 history and really the facts of his life.

25 A significant portion of your expert opinion

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1 is based on the conclusion that Jordan King has in  
2 fact suffered regressive autism, is that correct?

3 A That's correct.

4 Q Can you describe for the Special Masters  
5 what evidence you're relying on to reach the  
6 conclusion that he in fact suffered regressive autism?

7 A I thought that his mother articulated  
8 extremely well both the course of his first year of  
9 life giving a great deal of specificity about normal  
10 language and motor milestones, and then was able to  
11 corroborate with timing the issue of him losing  
12 certain skills, and developing certain mannerisms that  
13 seem to have emerged sometime around the 18th month or  
14 so, somewhere between 18 to 20 months, maybe give or  
15 take a little bit.

16 In my mind, she is a very reliable  
17 historian. We were able to look at her testimony in  
18 light of what was recorded in his well-baby checkups.  
19 During the first year of life, he was recorded as  
20 having met normal milestones, and it appeared his  
21 pediatrician was doing a conscientious job to assess  
22 those. I did note that he did not seem to have an 18-  
23 month checkup, which would have potentially been a  
24 valuable time to get further information. So by the  
25 time of his two-year checkup, they were recording



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1 concerns about development, especially with regard to  
2 his loss of language.

3 Q So perhaps phrasing it a different way, you  
4 saw nothing in his medical chart or his medical  
5 records up to that two-year visit indicating he had  
6 any symptoms or signs of autism?

7 A That's correct.

8 Q When was the first mention in the medical  
9 records made of what you would identify as a potential  
10 sign or symptom of autism?

11 A At the two-year checkup when he was noted to  
12 have lost his words.

13 Q And that would be -- let's go ahead and put  
14 up on the screen the exhibit. This would be, again in  
15 Jordan King's case, Exhibit 2, page 23. And Dr.  
16 Mumper, there is a document up on the screen in front  
17 of you there.

18 A Yes.

19 Q Could you take a look and identify that  
20 document, and direct our attention to the areas that  
21 you believe are of significance?

22 A This is a two-year checkup done on a  
23 pediatric template, and the area I would like to  
24 highlight is about a third of the way down the left  
25 column and it says, "Development". And you will see

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1 that expected at this age would be two-to-three-word  
2 sentences as the sort of minimal developmental  
3 milestone to be achieved, and some children have  
4 longer sentences.

5 The pediatrician appears to have crossed  
6 through that and put an arrow that says "doesn't talk  
7 at all, grunts, hums, on and on and lots of noise." I  
8 think she is referring to the grunting, the humming  
9 and the incessant nature of his humming as described  
10 by his mother. She also notes that he did use single  
11 words before the sister was born, and then she records  
12 none for about nine months, and I think that that  
13 should be viewed with probably plus or minus about two  
14 months. So clearly very abnormal for a two-year-old.

15 Q But again nothing before here, and even  
16 looking backwards from here at most would be nine  
17 months before even this doctor retrospectively would  
18 have identified a problem?

19 A That's correct.

20 Q Why is that significant as a period between  
21 15 and 18 months of normal developed followed by a  
22 note like this? What's significant about your  
23 assessment?

24 A The clinical picture is just very, very  
25 classic for this picture of regressive autism where

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1 the child appears to be developing normally by all  
2 observers for a period of at least a year, and then  
3 the typical clinical picture is a clear regression in  
4 the second year of life, between the first and second  
5 birthdays typically.

6 SPECIAL MASTER HASTINGS: Before you leave  
7 this document, just for the record, Dr. Mumper, in the  
8 note that you just went over where it says, "did use  
9 simple words" and then there is the letter "A" as I'm  
10 reading that with a line over it.

11 THE WITNESS: Yes.

12 SPECIAL MASTER HASTINGS: That's for the  
13 latin word "ante"?

14 THE WITNESS: Yes, meaning before.

15 SPECIAL MASTER HASTINGS: All right. Go  
16 ahead.

17 THE WITNESS: I think that was the end of my  
18 comment.

19 BY MR. POWERS:

20 Q All right, we can go ahead and take that  
21 document down.

22 Now, you just described how you haven't seen  
23 anything in the medical notes indicating there was a  
24 problem before them. I would like to draw your  
25 attention to Dr. Rust's report. This is Respondent's

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1 Exhibit II, and we're going to be looking -- the  
2 exhibit number page is page 9, and the internal page  
3 in the report, Dr. Mumper, is page 8, but on the  
4 exhibit it should be page 9 of 21, and do you see that  
5 page on the screen?

6 A Yes.

7 Q It was there for a second. That's the one.  
8 At the very top it says, "Jordan King, here and after  
9 J.K."

10 A Right.

11 Q If we could highlight the first paragraph  
12 there, and we'll get it blown up here. And we're  
13 pausing for just a moment as we get the computer  
14 image.

15 A I think I can actually read it, Scott,  
16 without blowing it up if that's more helpful.

17 MR. POWERS: And Special Masters, I assume  
18 you all can read that. Oh, it's really blown up now.

19 BY MR. POWERS:

20 Q If you notice in this paragraph, there is a  
21 sentence that begins, "Although Dr. Mumper's report,"  
22 and then it goes on. Can you read that sentence?

23 A Yes. "Although Dr. Mumper's report states  
24 that the onset of regression was at 15 to 20 months,  
25 J.K. Exhibit 13 at 2, J.K.'s father reported in his

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1 son's child development, child psychiatry initial  
2 evaluation that he stopped talking at about one year  
3 of age," and that's Exhibit 7 at 8.

4 Q And so let's go ahead and take a look at  
5 Jordan King's Exhibit No. 7, page 8. It's your  
6 understanding, Dr. Mumper, that Dr. Rust is  
7 attributing somewhere in the record that the father  
8 says he lost his words at 12 months of age.

9 A That is my impression of what Dr. Rust  
10 meant.

11 Q So now you have in front of you on the  
12 screen Exhibit 7, page 8, and I'll ask that the top  
13 half of the page be highlighted and blown up.

14 Now, this document, Dr. Mumper, what is your  
15 understanding of what this document is?

16 A This is part of an in-take form that the  
17 parents were filling out in order to undergo some  
18 comprehensive assessment about getting a diagnostic  
19 in-take evaluation on their child and potentially  
20 being evaluated for services.

21 Q Was this a form that was filled out at  
22 around two years of age or slightly after that?

23 A That's right. It was around two years of  
24 age.

25 Q And this is the page that Dr. Rust

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1 referenced?

2 A Yes.

3 Q If you looking the highlighted section now,  
4 in the bottom right quadrant there is a section called  
5 "Language". Do you see that?

6 A Right.

7 Q And there is a line that says, "Use single  
8 words".

9 A Right.

10 Q You see that?

11 A Yes.

12 Q Now, this is the parent being asked if the  
13 child uses single words.

14 A Right.

15 Q What does it say there?

16 A It says, "Around one year, then stopped."  
17 And the way that I would interpret that would be to  
18 mean that around one year Jordan was using single  
19 words, then sometimes between one year and the time  
20 that the parents filled out this form he stopped doing  
21 so.

22 Q And it does not say that he lost his words  
23 at one year, does it?

24 A Not at all, and in fact I thought his mother  
25 gave a really excellent language history when she

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1 testified here yesterday, and she did a great job of  
2 laying out a number of words at a year, and if  
3 anything, one would say that he had slightly  
4 precocious language by history.

5 Q So would you agree or disagree with Dr.  
6 Rust's characterization of that single chart note?

7 A I definitely disagree with his assessment.

8 Q Do you recall anything else in Dr. Rust's  
9 expert report in Jordan's case that provides evidence  
10 that there was a lack of regression?

11 Anything in Dr. Rust's report saying that  
12 Jordan in fact was nonregressive that cites to the  
13 medical records?

14 A Let me just review so I'm sure to be  
15 accurate.

16 No, I do not find anything else that would  
17 argue with our contention that he had regressive  
18 autism.

19 Q Thank you. Okay, you set that expert report  
20 aside then for a minute.

21 In your review of Jordan King's medical  
22 records, you've already described up until the second  
23 year visit there was a lack of any concern about  
24 developmental problems. How would you describe  
25 Jordan's general state, his overall health as

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1 reflected in those records up to age two?

2 A You know, he was actually pretty healthy.  
3 He had a little bit of a rocky start in that the birth  
4 was prolonged which demonstrated by the record that  
5 the mother had a 20-hour labor and prolonged rupture  
6 of membranes which is recognized as a potential risk  
7 for infection, so standard of care is to treat in  
8 those situations, treat the mother with IV  
9 antibiotics. But he had normal well-baby exams at  
10 two, four and six months.

11 The mother did have an infection, took some  
12 antibiotics while nursing him. He did have an illness  
13 around four months of age with lethargy and vomiting,  
14 but that would clearly not be out of the range of  
15 normal for a child to have some intermittent  
16 illnesses, presumably viral, and so I would say that  
17 he actually appeared to be a healthy baby.

18 Q Now, there was an episode where he had a  
19 fever and an emergency room visit.

20 A That is correct.

21 Q In your review of the medical records, and  
22 your clinical experience, was there anything in that  
23 record that would indicate anything that would be  
24 causally related to the appearance of autistic  
25 regression later in his life?



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1           A     The record basically reflected a child with  
2     a fever going for an appropriate workup, and no  
3     concerning etiologies were found. So the child was  
4     left to resolve the illness with basically minimal  
5     medical intervention.

6           Q     So based on everything that you have just  
7     talked about, have you reached a conclusion about  
8     whether Jordan King suffered from regressive autism?

9           A     Yes, it's my clear belief based on my  
10    clinical experience that he has a clear case of  
11    regressive autism.

12          Q     I want to move on and talk about etiology,  
13    and I want to talk about the causation picture.

14          A     Okay.

15          Q     Having concluded that this is a boy who  
16    experienced an autistic regression, what did you do in  
17    Jordan's case to identify a potential cause of his  
18    regression? What was the evaluation that you did  
19    similar, I presume, to the one you did in William  
20    Mead's case?

21          A     Right. So similarly, I generated a  
22    differential diagnosis of potential causes of autism  
23    and then went through the records to find out if with  
24    reasonable medical certainty other causes had been  
25    ruled out, and I actually found a very nice summary by

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1 one of the geneticists who evaluated him, looking at a  
2 laundry list of the evaluations he has had, and  
3 essentially laid out a nice differential diagnosis and  
4 that geneticist concluded that those things had all  
5 been normal.

6 Q Let's go ahead and look at Exhibit 7, page  
7 16, and that's on the screen in front of you. Is that  
8 what you were referring to in your earlier testimony,  
9 the genetic workup?

10 A Yes, that is. It's a clinical and  
11 biochemical genetics consultation report from Legacy  
12 Health System by Dr. George Anadiotis.

13 Q And what is the date? If you looked at the  
14 top right-hand corner, what's the date of this  
15 evaluation?

16 A 8-25-02. Is that correct? I'm sorry, 8-23-  
17 01.

18 Q Okay. And is it that report you're relying  
19 on as ruling out known other causes of autism in  
20 Jordan?

21 A Well, it's this report that I thought  
22 reflected a nice summary for our purposes. I actually  
23 went through the record myself to verify, but on the  
24 next page, or perhaps the third page he lists in one  
25 place the laboratory assessments that were done, so I

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1 thought that would be helpful.

2 Q Yes, and if you would turn to your paper  
3 copy and let us know the exhibit number and the page  
4 number of your paper copy, and we'll go ahead and put  
5 that on the screen. Would this be Exhibit 7, page 17?

6 A Exhibit 7, page 18. So, Scott, if you could  
7 zoom in on the lab work area.

8 This essentially lists a lot of things that  
9 had been done in the workup to that point, and the  
10 genetics doctor concluded that they had all been  
11 unremarkable. In doing that, there are appropriate  
12 workups to look for classic autism, classic genetic  
13 autism, and it's a good summary.

14 Q In looking through the rest of the medical  
15 records, would you agree with the summary? In other  
16 words, there is nothing that would contradict the  
17 summary there?

18 A Well, in terms of the traditional labs, yes.  
19 He and I would have a different opinion about the  
20 potential contribution for some of the so-called  
21 functional tests that we feel forced to rely on to  
22 evaluate the way the child cells are functioning as  
23 opposed to the actual anatomy.

24 Q Okay. Is there anything you wanted to  
25 comment on on that particular exhibit?

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1           A     On the next page there is a very nice  
2     physical exam that I wanted to point out to the  
3     Special Masters because this is clearly an exam that  
4     is intended to make sure that the child did not  
5     exhibit any form of genetic recognized syndromes. You  
6     can tell that first in the HEENT exam in which they go  
7     to great lengths to describe the distance between the  
8     eyes and the way that the eyes are situated, and that  
9     the ears are well formed, and that the child doesn't  
10    have abnormal clefting of the palate, and essentially  
11    it's saying that the child does not have any sign of  
12    dysmorphic faces that would make you think about a  
13    genetics cause.

14                Then he also, in the chest exam, measures  
15    the nipple distance, which is another way that the  
16    geneticists look for some genetic syndromes, and then  
17    also they look at hands to look for subtle  
18    abnormalities on the hands, which again Jordan did not  
19    exhibit.

20           Q     Anything else of significance there?

21           A     I think that's what I wanted to point out.

22           Q     Okay. Do you recall testimony from Mrs.  
23    King that they did sort of a toxicological examination  
24    of the house where they live?

25           A     Yes, and that was actually very helpful

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1 because I wanted to clarify for the Special Masters  
2 that at the time I wrote this report I had not had the  
3 advantage of talking to the mother. So one of my  
4 concerns was that there was the possibility that  
5 Jordan may have suffered from some synergistic  
6 toxicities in that at the time he was exposed to  
7 thimerosal-containing vaccines there may have been  
8 other environmental exposures that would be worthy to  
9 take into account.

10 After talking to Mrs. King yesterday, she  
11 described in detail how she essentially turned every  
12 stone, getting some very sophisticated analyses on her  
13 house, and finding that there was no clearly  
14 identifiable other source of mercury in particular.

15 One of the reasons that I was concerned  
16 about this is that one of the devices we use to try to  
17 narrow our differential diagnosis is to look at  
18 environmental information, and you can actually use  
19 the Internet to find by ZIP code relative loads of  
20 environmental toxicants, and the Pacific Northwest is  
21 one of the areas that we worry about because they get  
22 a fair amount of pollution from China. So I was  
23 worried that perhaps he had environmental causes.

24 Mrs. King actually did a very good job of  
25 looking at her house, and it seems that we do not have

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1 other reasons to explain the mercury. I think she  
2 mentioned yesterday she only has one amalgam.

3 Q Now, from your review of the medical  
4 records, did Jordan King get the full course of  
5 recommended pediatric vaccines?

6 A That's correct.

7 MR. POWERS: And I actually have -- actually  
8 help summarize those shots. It would be a new trial  
9 exhibit, but we do have copies here and we can put it  
10 upon the screen to chronologically rather than  
11 scattered across the page put all the shots together.

12 Dr. Mumper, if you look at that, we're going  
13 to need to mark this as a trial exhibit. Would it be  
14 5 or 6?

15 THE WITNESS: Let's mark it as Trial Exhibit  
16 5, although now I just realized we're doing two  
17 different trials here unlike last year. But why don't  
18 we simplify things, and just mark it as Petitioner's  
19 Trial Exhibit 5. We may not file it into the Mead  
20 case, but for now it's mark it as Trial Exhibit 5 so  
21 we have no confusion.

22 MR. POWERS: Thank you, Special Master.

23 BY MR. POWERS:

24 Q So what you see on the screen there, Dr.  
25 Mumper, does that look like an accurate representation

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1 of the shot schedule that Jordan King received?

2 A You know, I have to clarify to say that one  
3 of the things that is missing here would be the  
4 routine IPVs that did not contain thimerosal, so I  
5 would have to say that this reflects thimerosal-  
6 containing vaccine.

7 Q Thank you for clarifying.

8 So this is his thimerosal-containing vaccine  
9 summary?

10 A Right.

11 Q Thank you.

12 So you consider that in your analysis of  
13 causation in Jordan King's case, correct?

14 A That's correct.

15 Q Okay. Now, based on these and then some lab  
16 results that we're going to talk about, did you form  
17 an opinion to a reasonable degree of medical certainty  
18 about what you believe was a substantial contributing  
19 cause to Jordan's regressive autism?

20 A Yes.

21 Q What is that opinion?

22 A I did form the opinion that I thought that  
23 thimerosal-containing vaccines contributed to his  
24 neurodevelopmental problems and the development of  
25 autism.

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1 Q I do want to focus now on some of the lab  
2 work as we did with William's case.

3 A Okay.

4 Q I'm going to ask you to take a look at  
5 Exhibit 1, page 36. Now that's on the monitor there  
6 in front of you.

7 A Okay. United States

8 Q Can you identify that document?

9 A Yes, that's a fecal metals.

10 Q What is a fecal metals test?

11 A Fecal means stool or feces, and that's  
12 essentially measuring in the stool different types of  
13 potentially toxic metals.

14 Q And what on this chart or this lab result is  
15 of significance to you?

16 A I see that the bottom that we've just blown  
17 away from that it was a provoked specimen, so I just  
18 want to mention that. The chemet was a detoxifying  
19 agent, and we expect that when kids are being chelated  
20 they are going to excrete mercury and other metals  
21 either in their stool or their urine or some  
22 combination of the two.

23 So this is reflecting to me that he had a  
24 very large excretion, greater than 95th percentile, to  
25 the chemet.



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1 Q And this is particularly referring to  
2 mercury which is up on the top line of this test  
3 result?

4 A That's correct. He also showed a relatively  
5 high elevation of arsenic. We do see arsenic in some  
6 of our kids. There is actually arsenic in a lot of  
7 grocery store chickens, and so when we see this  
8 pattern we recommend that they use organic chickens  
9 instead.

10 Q What's the significance of this lab result  
11 to your opinion that thimerosal-containing vaccines  
12 contributed to Jordan's injuries?

13 A I would say that it is provocative evidence  
14 but nothing that's definitive just on the basis of the  
15 stool, but it certainly confirms that there was  
16 mercury mobilized and excreted in the stool.

17 Q Let's look at Exhibit 1, page 45?

18 Oh, I'm sorry. Could we go back, before we  
19 move on go to back to page 36 of Exhibit 1? What date  
20 was this test administered?

21 A 5-2-2000 something, 2000.

22 Q Okay. So now we can move on to Exhibit 1,  
23 page 45. That document is in front of the screen  
24 right now. Can you identify that document?

25 A It's a [lab report]. It's a urine in

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1 which elements are measured and the results are normed  
2 per gram of creatinine, and in this case it once again  
3 is showing a very elevated reading on mercury, about  
4 twice the upper range of normal.

5 Q And if you look at this lab result, can you  
6 tell whether this was a chelation-provoked urine test?

7 A Yes, it says post-provocative challenge, but  
8 it does not provide the agent.

9 Q Okay. And this was a test that was done  
10 when? Can you see? Particularly, when was the  
11 specimen collected?

12 A May 5, 2000.

13 Q What's the significance of this test, if  
14 any, to your ultimate opinion that TCVs contributed to  
15 Jordan's injuries?

16 A Because I have looked at other potential  
17 sources of mercury and not identified them, and  
18 because he is excreting significant mercury, I put  
19 thimerosal-containing vaccines on the list for the  
20 differential diagnosis of what could have contributed  
21 to his autism.

22 Q Let's look at Exhibit 1, page 35. Can you  
23 go ahead and identify that document?

24 A Yeah. This is another urine toxic elements,  
25 again showing a relative elevation of mercury. This

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1 time also showing some elevation of tin. This was  
2 also post-provocative. Tin is found in certain juice  
3 boxes and toothpastes. So when we see this we do some  
4 environmental controls to try to remove that as a  
5 source.

6 Q And when was this test, when was this sample  
7 collected?

8 A December 30, 2000.

9 Q What's the significance of this lab result  
10 to your ultimate opinion on causation in this case?

11 A Again, it is part of the mounting laboratory  
12 evidence that he had a significant mercury load that  
13 he was mobilizing.

14 Q Let's look at Exhibit 1, page 33. Please  
15 describe that document and identify it.

16 A This is a lab that I've never used, Meridian  
17 Valley, it's a microdigestive panel, and they are  
18 looking microscopically, meaning that they are  
19 examining the stool under the microscope, and they  
20 have established norms for certain amounts of fats and  
21 starches and undigested meat fibers that would be seen  
22 in the stool.

23 Scott, if you could blow up the microscopic  
24 exam with the values for me.

25 It is certainly true that normal kids will

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1 have some of these things, and in fact when we see  
2 undigested meat fibers come back or vegetable fibers,  
3 we try to figure out if the child is maybe missing  
4 something as simple as just chewing his food  
5 inadequately.

6 But in this case the lab, at least by their  
7 norms, was suggesting that there was some increase in  
8 fats and starch, and I would, not knowing the real  
9 merits of this particular laboratory, say that this  
10 has to be considered soft evidence of potential fat  
11 absorption problems or carbohydrate absorption  
12 problems, but nothing that is very definitive in  
13 isolation.

14 Q And drawing that conclusion from the lab,  
15 what significance, if any, does it have to your  
16 ultimate opinion on causation in this case?

17 A It reenforces the parents' story that there  
18 was chronic diarrhea. It doesn't for me provide  
19 direct evidence about causation.

20 Q Now we're going to move on to Petitioner's  
21 Exhibit No. 1, page 31. Can you identify that  
22 document, please?

23 A This is a document in which they are looking  
24 at immunoglobulins, and --

25 Q And let me interrupt for just a second.

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1 What tissue would be tested in this?

2 A This would be a blood test.

3 Q And when was this administered or when was  
4 the --

5 A It looks like it was received on February  
6 21, '01.

7 Q And now please go ahead and describe what  
8 you see in here that is of interest to you.

9 A This is looking at immunoglobulin G, which  
10 is low at 666 with normal value being 800 to 1,700,  
11 and IgA being low at 81, normal values being 100 to, I  
12 think, 450 for males.

13 Again I am not intending this to show any  
14 kind of particular immunologic definable syndrom or  
15 immunological deficiency in the classic sense, but I'm  
16 using it to show that this is a child who had  
17 relatively low secretory IgA, at least as measured by  
18 this lab.

19 Q And what is the significance, if any, of  
20 that particular result to your ultimate opinion on  
21 causation?

22 A We're concerned about immune dysregulation  
23 as related to thimerosal-containing vaccines, and so  
24 it becomes another piece of soft evidence that's  
25 consistent with the hypothesis and the conclusions.

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1 Q Let's move on to Petitioner's Exhibit 1,  
2 page 23. Can you identify that, please?

3 A This is a red blood cell element analysis  
4 similar to the ones that we looked at this morning  
5 from Metametrix Lab. It is looking at essential  
6 elements in the red blood cells and showing a pattern  
7 where things like copper and chromium and magnesium  
8 and manganese and selenium and zinc are low. Again  
9 the low zinc and selenium are commonly seen in kids  
10 with autism.

11 We use this as an ongoing monitoring for  
12 safety of chelation therapy because we want to make  
13 sure that the child's essential elements don't drop  
14 low as we're trying to use chelation to get the bad  
15 stuff out. We also get calcium or zinc and other  
16 essential elements out.

17 Q Now, with the issue of mercury exposure  
18 being front and center here, is there anything in  
19 particular about the selenium and zinc levels that are  
20 of interest to you?

21 A Again, we use those as soft indicators to  
22 add to our evidence that the child may be depleting  
23 those sources, but it could also be due to lack of  
24 intake. It doesn't seem as likely in these patients  
25 since they were being aggressively supplemented, but

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1 that certainly would be a possibility.

2 Q Now, related to mercury, why would selenium  
3 and zinc be of concern in particular?

4 A Because for excreting mercury by  
5 metallothionein mechanisms, you would need four  
6 molecules of zinc for every time you escort the  
7 mercury out of the body, and selenium has a role in  
8 detoxifying methyl mercury also. Methyl mercury,  
9 particularly, not necessarily exclusively ethyl  
10 mercury.

11 Q Now, if you look under toxic elements, there  
12 is a reading there for mercury. This is in the --  
13 sort of the page, it's in the middle of the page, but  
14 it's the second highlighted category. There you go.

15 A Yes.

16 Q Anything significant about the mercury level  
17 there which looking at the top of the page would fall  
18 in the band of low level?

19 A Yes. The only thing that this would really  
20 tell me is that in the time period in which this blood  
21 was drawn, since blood, you know, turns over about  
22 every 120 days, there do not seem to be any  
23 significantly high ongoing sources of mercury at this  
24 time.

25 Q How does that conclusion support the

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1 ultimate opinion that you're rendering on causation  
2 here?

3 A Well, since at the time of this study he was  
4 three, it helps me try to zero in on potential sources  
5 of mercury, and knowing that he got his thimerosal-  
6 containing vaccines at an earlier time.

7 Q Let's look into Petitioner's Exhibit 1, page  
8 22. Can you identify that document?

9 A This is a Metametrix Laboratory nutritional  
10 recommendation based on their laboratory assessment,  
11 and I use it as just evidence that, at least by the  
12 way they determined their labs, it seems to be a child  
13 who needs amino acid supplementation, some  
14 antioxidants and some B vitamins. Those are all well  
15 described in children with autism as potential  
16 deficiencies.

17 Q Why might this kind of report be relevant to  
18 your opinion on general causation here involving TCVs?

19 A Because we remain concerned about children  
20 who don't have adequate glutathione, adequate  
21 antioxidant protection, being able to handle  
22 thimerosal.

23 Q And is that related to Dr. Deth's  
24 description of the role of oxidative stress in  
25 regressive autism?



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1 A That's correct.

2 Q Let's look at Exhibit 1, page 58. What is  
3 this lab result?

4 A This is a chemistry profile, and a complete  
5 blood count. These are very classically, probably the  
6 most popular lab tests to order in children.

7 Q And if we could go ahead and zero in on the  
8 table.

9 A Yes.

10 Q There. Thank you. That's great.

11 A So what we see here is that the child shows  
12 a low creatine of 0.3 micrograms per deciliter, I  
13 believe. This is very common in children with autism.  
14 There are a number of potential reasons for that.  
15 Some children once they regress into autism will have  
16 relatively low muscle mass. Some do not. It may be  
17 related to other biochemical pathways, but it's one of  
18 the very most consistent findings we see in clinical  
19 practice, and when we've looked at large series it has  
20 a P value like seven zeros in terms of how common this  
21 finding is.

22 The bicarb is low at 19. Typically, a  
23 bicarb should be in the 23 to 30 range. I mentioned  
24 earlier that low bicarbs can signify metabolic  
25 acidosis or ongoing illness or potentially loss of

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1 bicarbonate through the stool with chronic diarrhea.  
2 All those things I would consider to be evidence that  
3 the child at least at the time of this test was under  
4 oxidative stress, and add credence to the idea that  
5 ongoing chronic diarrhea could be depleting him of  
6 bicarb and adding to a chronic metabolic acidosis,  
7 which would be an environment that would perpetuate  
8 oxidative stress.

9 Q Anything else of interest to you on this  
10 particular lab result?

11 A Just a few things. The other value that's  
12 high is a ALT, which is one of the liver enzymes, but  
13 it's only marginally high, and the others are normal  
14 so I don't really think that's probably a clinical  
15 significant. The alkaline phosphatase is a little bit  
16 high. That's an enzyme that can relate to either the  
17 liver or the bone, and since Jordan at this time was  
18 presumably growing, since it's not a usually high  
19 elevation I would probably not work that up further,  
20 and the phosphorous is a little bit high but again in  
21 isolation I would not probably work that up. His  
22 calcium is normal.

23 We do try to look at the calciums very  
24 carefully in the children that are on casein-free  
25 diets.

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1 Q And can you explain the significance of what  
2 you just described overall with this record, if there  
3 is any, in forming your opinion on causation in this  
4 case?

5 A Again, taking in context with other  
6 information, it suggests a child that has chronic low-  
7 level metabolic acidosis by the bicarb, has the  
8 typical findings of low creatinine, and the main  
9 concern I have is how much of an ongoing state of  
10 stress is he in since he had such a problem initially  
11 with chronic diarrhea.

12 Q Okay. Let's go to Exhibit 1, page 55. What  
13 is that document?

14 A This is another urine toxic metals, and this  
15 one looks like it was done in February of '03, and  
16 again it's showing as a provoked urine, that the  
17 mercury is way off the chart, and the tin is way off  
18 the chart.

19 Q Now, what's the significance of this result  
20 for you?

21 A This is a very dramatic provoked urine  
22 because the mercury is essentially seven times the  
23 normal value, so it's suggesting that the child has a  
24 significant body burden.

25 Q What does this high tin result suggest to

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1 you?

2 A Environmental exposures probably. Again, I  
3 would be thinking about things like toothpaste or  
4 juice boxes or there are a few other things that don't  
5 come to mind at the moment that are printed out on the  
6 back of the laboratory report.

7 Q Is there anything else that you can think of  
8 from your clinical experience that might explain in  
9 particular such a high level of tin?

10 A Not typically, no.

11 Q Okay. What, if anything, does this result  
12 do to inform your opinion on causation here?

13 A Again, in a child who seems to be continuing  
14 to excrete a mercury burden in the absence of other  
15 sources of mercury, it makes me wonder about  
16 implicating thimerosal-containing vaccines.

17 Q And I have one more record but this is one  
18 that -- this is a record that I need to check the  
19 exhibit number on, so if I could have just a brief  
20 moment.

21 (Pause.)

22 MR. POWERS: This is one we may need to use  
23 the camera for. We can't find the image in our  
24 computer.

25 (Pause.)

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1 MR. POWERS: Apparently this is something  
2 that somehow did not get stamped with an exhibit  
3 number, so we're not going discuss it. It's not  
4 significant enough to make a motion to introduce it to  
5 the record now.

6 BY MR. POWERS:

7 Q So, Dr. Mumper, those are the extent of the  
8 lab results that we were going to be discussing today.  
9 We've gone through them one at a time, but can you  
10 summarize for the Special Masters what you believe the  
11 results that you've just discussed have to say about  
12 your opinion on causation here? Why is all of this  
13 information relevant?

14 A I would put this story together as showing  
15 ongoing excretion of a mercury burden in a child where  
16 we don't have an alternative explanation, and thereby  
17 potentially implicating thimerosal-containing  
18 vaccines. It is a child who is basically pretty  
19 healthy until the development of the chronic diarrhea,  
20 but there are some lab values that suggest he may  
21 intermittently have mild metabolic acidosis or some  
22 problems with fat malabsorption, and that that should  
23 be taken as evidence consistent with the idea that  
24 thimerosal was a contributor to the development of his  
25 autism.

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1 Q Now, I have some general questions that I  
2 want to ask you about the use of these kind of lab  
3 results generally. A number of the labs in both  
4 Jordan's and William's cases involve provoked  
5 challenges that draw mercury out. You recall going  
6 through an extensive number of those?

7 A Yes.

8 Q Where in the body do you believe this  
9 mercury that is being excreted in a provoked test,  
10 where is that mercury coming from?

11 A To the best of our knowledge in looking at  
12 the literature at ARI, we believe it's being mobilized  
13 from fat and kidney.

14 Q Is there any contention that underlies your  
15 report, that this is mercury that is being drawn out  
16 of the brain itself?

17 A No. We really don't have evidence to make  
18 that claim.

19 Q And you certainly wouldn't be making that  
20 claim anywhere in your report or in your specific  
21 analyses of these labs; that is, that the mercury  
22 coming out here represents mercury coming out of the  
23 brain?

24 A No, I would not want to leave that  
25 impression at all. We believe that not to be the

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1 case.

2 Q So the obvious question then is, if the  
3 mercury that's coming out here isn't coming out of the  
4 brain, and the brain is where the mechanism of injury  
5 is occurring, why are these tests relevant to your  
6 opinion?

7 A Yeah. Again, I rely heavily on our  
8 understanding of methylation biochemistry and  
9 oxidative stress, and also relying heavily on our  
10 contention that if you treat medical problems in  
11 children with autism their autism gets better. So  
12 whereas we would all love to have an agent that  
13 mobilized mercury from the brain in a very safe way,  
14 to my knowledge we do not have that.

15 So, we are trying to do as much as we can  
16 for the children by treating their medical problems  
17 and by trying to treat their inflammation in the rest  
18 of their body, potentially neuroinflammation as is  
19 being currently looked at at NIH, and thereby allow  
20 them to mobilize their normal protective mechanisms to  
21 the best they can in order to excrete their mercury  
22 burden. That is the concept.

23 Q So would you expect a child who got a course  
24 of mercury-containing vaccines, who is not autistic,  
25 would you expect to see the same sort of lab results

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1 in terms of mercury coming out a couple of years after  
2 the shots?

3 A Well, I wouldn't expect to see it, but I'm  
4 not aware that that study has actually been done, so I  
5 can't really say for sure.

6 Q But you wouldn't expect to see it, correct?

7 A I wouldn't expect to see it because in the  
8 normal child, the neurodevelopmentally normal child, I  
9 would expect that that child would have mobilized his  
10 or her resources at the time of the injection and  
11 handled the vaccines well as the vast, vast majority  
12 of children apparently did.

13 So, no, I would not expect to see them still  
14 excreting it later unless they were getting it from  
15 another source.

16 Q I addressed the issue briefly before, but I  
17 want to raise it again. In looking at these lab  
18 results collectively now that we've seen them from two  
19 different children, there is this characteristic that  
20 the mercury levels over time for each of the child  
21 based on these tests seem to be going up and down, or  
22 maybe I shouldn't say mercury levels, the test  
23 results.

24 A Right. Or retain variable excretion.

25 Q Why might that be? Now that we've had two



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1 different boys to look at, you see the same pattern  
2 from test to test.

3 A Yeah, I wish I knew because this is the kind  
4 of thing that drives me crazy on a day-to-day basis.  
5 As I think I mentioned earlier, sometimes doing  
6 something like really working hard on methylation  
7 biochemistry. My favorite way of chelating is  
8 actually to use the body's own mechanisms. So I try  
9 to utilize a lot of methaqualamin, folinic acid,  
10 glutathione, which are all pushing the body's natural  
11 methylation sulfation cycles, and sometimes when you  
12 do that you can get huge excretions of mercury,  
13 potentially other toxins, even more so than if you  
14 were to use a chelating agent.

15 Sometimes if one picks DMPS, thinking it's  
16 more specific for mercury, you don't get as much  
17 mercury out as you got with DSMA. So we will be the  
18 very first people to admit that this is a very inexact  
19 science at this point; that we have felt compelled to  
20 look into it because of the science that has been  
21 brought to our attention, but we are very eager for  
22 places like NIH to study it, and we are very eager to  
23 have more guidelines about how to do it in the best  
24 possible way, and potentially alternative ways of  
25 pushing the body's natural pathways.

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1 MR. POWERS: Doctor, I have no further  
2 questions for you right now.

3 THE WITNESS: Thank you.

4 SPECIAL MASTER HASTINGS: Thank you, Mr.  
5 Powers.

6 Mr. Matanoski, do you folks want to begin  
7 your cross of Dr. Mumper at this point?

8 MR. MATANOSKI: Your Honor, in light of the  
9 fact that we probably would go beyond the end of today  
10 to finish it, if it's okay with the Court, we would  
11 rather just begin it tomorrow.

12 SPECIAL MASTER HASTINGS: How long total are  
13 you thinking?

14 MR. MATANOSKI: Three and a half to four  
15 hours.

16 SPECIAL MASTER HASTINGS: Fine.

17 MR. POWERS: If we could weigh in, even if  
18 we could get a couple of hours done now and not  
19 necessarily work all the way to the end but of there  
20 is some natural breaking point to make some progress  
21 in cross now to see what we can get done since we are  
22 all here and it's 3:30.

23 MR. MATANOSKI: We have an entire day  
24 tomorrow to do cross, redirect and re-cross, and our  
25 preference would be to start tomorrow rather than

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1 break today after going through part of this. It may  
2 make more sense to go through it all.

3 Just a moment, I will consult.

4 SPECIAL MASTER HASTINGS: Mr. Power, do you  
5 anticipate you will be doing any rebuttal tomorrow?  
6 Obviously, you haven't heard the cross yet, but do you  
7 have any idea?

8 MR. MATANOSKI: if I may, we could -- I just  
9 spoke with co-counsel, and he said he could get  
10 through some of it today, and we can probably find a  
11 natural breaking point. However, could we just have a  
12 brief break before we go, 10 minutes or something like  
13 that?

14 SPECIAL MASTER HASTINGS: Okay, let's take a  
15 10-minute recess, and we'll come back.

16 MR. MATANOSKI: Thank you, Your Honor.

17 (Whereupon, a short recess was taken.)

18 SPECIAL MASTER HASTINGS: We're going to go  
19 ahead then and have you start your cross-examination  
20 of Dr. Mumper.

21 MR. MATANOSKI: Actually, Your Honor. Mr.  
22 Powers came up to me just after you left and said that  
23 there was a matter that MyLinda King would like to  
24 further talk about that she didn't have a chance to,  
25 it didn't come up this morning, and I said that's fine

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1 if she wants to go back and --

2 SPECIAL MASTER HASTINGS: Very good.

3 MR. POWERS: Yes, this would be to bring her  
4 back on a very, very brief --

5 SPECIAL MASTER HASTINGS: That's time.

6 MR. POWERS: -- some issues raised in  
7 testimony earlier.

8 SPECIAL MASTER HASTINGS: Definitely. Ms.  
9 King, would you please take the stand again.

10 MR. POWERS: And for the technology, if we  
11 could switch the computer back to the Petitioner's  
12 devise, that would be great. Are we on that, Scott?

13 SPECIAL MASTER HASTINGS: Please be seated,  
14 Ms. King. You are still under oath from before, so,  
15 Mr. Powers, please go ahead.

16 Whereupon,

17 MYLINDA KING

18 having been previously duly sworn, was  
19 recalled as a witness herein and was examined and  
20 testified further as follows:

21 MR. POWERS: Thank you very much.

22 Welcome back, Ms. King. Get situated there.

23 //

24 //

25 //

KING - REDIRECT

1340

1 REDIRECT EXAMINATION

2 BY MR. POWERS:

3 Q You were in the courtroom earlier this  
4 morning when you heard testimony regarding Dr. Rust's  
5 expert report in this matter?

6 A Yes, I was.

7 Q And you saw reference to and this, what we  
8 are looking at on the screen here is Respondent's  
9 Exhibit II. That's the front page. We would be  
10 looking at Exhibit II, page 9 of that document if we  
11 could get that on the screen. And if we could  
12 highlight that first paragraph, please.

13 So in looking at this page and recalling the  
14 testimony this morning, do you see reference there to  
15 Dr. Rust's representation that Jordan King's father  
16 reported in his son's child development evaluation  
17 that Jordan stopped talking at about one year of age.  
18 Do you see that?

19 A In that highlighted paragraph?

20 MR. POWERS: No, Scott, that's the wrong  
21 page.

22 SPECIAL MASTER HASTINGS: It's the previous  
23 page.

24 MR. POWERS: The previous page.

25 MR. POWERS: Yes, suddenly you do have an

KING - REDIRECT

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1 M.D., believe it or not. There you go.

2 BY MR. POWERS:

3 Q Do you see it? It says --

4 A Yes. Okay. Yes, it says, "Jordan's father  
5 reported."

6 Q Okay. And so that's Dr. Rust saying that  
7 Jordan's father reported that something very specific  
8 in the child's records, correct?

9 A Yes.

10 Q And you recall that testimony?

11 A Yes.

12 Q Let's go ahead and look at the record that's  
13 referred to. This would be Petitioner's Exhibit 7 at  
14 page 8. And if you look at that page, there is a  
15 highlighted portion there.

16 A Yes.

17 Q Is that your husband Fred King's writing?

18 A No, none of that is Fred's handwriting.

19 It's mine.

20 Q So you're the one that wrote, "around one  
21 year, then stopped." Is that right?

22 A Yes.

23 Q And since you're the person who wrote that,  
24 can you explain to the Special Masters what you meant  
25 by that?

KING - REDIRECT

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1           A     Well, I tend to be really succinct when I  
2     answer questions verbally or in writing, and what I  
3     meant or what I thought I was being asked if he was  
4     talking by the time he was one year old, and he was.  
5     And then I put a comma in and said "then stopped",  
6     because the whole reason -- the whole point of the  
7     visit was that he wasn't talking anymore. What I did  
8     not mean is that he started and stopped talking at one  
9     year of age.

10          Q     And if we could then look at the same  
11     exhibit, Exhibit 7, page 9. Could you look down at  
12     the bottom?

13          A     Yes. It says MyLinda King.

14          Q     And you need to speak up. Do you see a  
15     space there where it says, "Name of person completing  
16     this questionnaire"?

17          A     Yes, I see that now.

18          Q     And whose name is there as having completed  
19     the questionnaire?

20          A     MyLinda King.

21                MR. POWERS: Thank you very much. Nothing  
22     further.

23                THE WITNESS: Okay.

24                SPECIAL MASTER HASTINGS: All right.

25                (Witness excused.)

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1 SPECIAL MASTER HASTINGS: Before we start  
2 with the cross here, just a housekeeping issue that  
3 arises from the confusion with Dr. Rust's exhibit. A  
4 number of the exhibits, like the one we just had on  
5 the screen of Dr. Rust's, the pagination that comes  
6 out of our case management system sometimes gives you  
7 a different page number than at's the bottom of the  
8 screen. We just had that confusion with page 9  
9 according to the ECF, but at the bottom of the page of  
10 the expert it's listed page 8.

11 In the post-trial briefing for both sides,  
12 if you can remember this, let's use the pagination of  
13 the original report at the bottom, just so we're not  
14 always a page or two off, and I'm trying to look at  
15 the wrong page, and I'm trying to figure out what  
16 you're citing in your briefs. If we all do it that  
17 way, it will probably be easier.

18 But go ahead then, Mr. Johnson.

19 MR. JOHNSON: Thank you, Special Master.

20 CROSS-EXAMINATION

21 BY MR. JOHNSON:

22 Q Good afternoon, Dr. Mumper. My name is Vo  
23 Johnson, and I represent the United States.

24 I'm going to start by asking you a couple of  
25 questions from the CV that you submitted in this case.

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MUMPER - CROSS

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1 A Okay.

2 Q And specifically, I want to look at the  
3 section that lists your publications.

4 A Okay.

5 Q And am I correct that you only list two  
6 journal articles published in the last 10 years?

7 A That is correct.

8 Q Okay. And you were listed as an author on  
9 both of those articles?

10 A That is correct.

11 Q The first article that's listed appears to  
12 involve hyperbaric oxygen therapy, and I was wondering  
13 if you would just describe that study.

14 A Hyperbaric oxygen therapy, as we are  
15 investigating it for use in autism, is mild  
16 hyperbarics. The study in question used 1.3  
17 atmospheres of pressure, and that is roughly  
18 equivalent to 9 to 11 feet underwater in terms of the  
19 pressure. The oxygen used was somewhere between 24  
20 and 27 percent. We had an oxygen concentrator, but no  
21 actual oxygen masks or hoods.

22 The reason that this came up is that people  
23 were using home hyperbaric chambers and we wanted to  
24 do a safety study, and so we essentially got Jill  
25 James, who was the one that done the methylation

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1       biochemistry studies, to do markers for us because  
2       since the first rule of medicine is first do no harm,  
3       we wanted to make sure that the parents who were  
4       purchasing these chambers weren't in some way making  
5       the very core of what we were trying to treat worse.  
6       So we wanted to make sure it didn't have a negative  
7       impact on methylation biochemistry or glutathione  
8       levels.

9                So it was essentially an open label pilot  
10       study to look at the safety with regards to the  
11       methylation biochemistry. We also had some measures  
12       that were reported both by the parents and the  
13       clinicians about potential effects, but it was mainly  
14       a safety study.

15            Q       And just for the record, can you describe  
16       how hyperbaric oxygen therapy works? What do you do  
17       when you administer that therapy?

18            A       In the study in question, there are soft  
19       chambers that deflate, and the child and the parent  
20       get into the chamber, and they get zipped up, and then  
21       slowly over a period of about 10 minutes the pressure  
22       is turned on such that it gets to 1.3 atmospheres.  
23       The child stays there for an hour, and then over 10  
24       minutes or so the pressure is dialed down again.

25                The reason that it's so much of interest in

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1 autism is that pre- and post-spec fans are suggesting  
2 that by doing this you increase profusion to the  
3 brain, sometimes quite dramatically, and the concern  
4 with our patients is that if they are not adequately  
5 profusing their brain or presenting their brain cells  
6 with the proper nutrients, that they may continue to  
7 have autistic symptoms that we might be able to deal  
8 with in a safe and effective way.

9 So the chambers that we used were approved  
10 for home use by the FDA, and we did it with that  
11 underlying mechanism of treating brain profusion, and  
12 anecdotally, we feel that it's very good for  
13 inflammation. We don't have a lot of inflammatory  
14 markers. One of the markers in the study was a child  
15 that had a C-reactive protein of 69, which is very,  
16 very high. Depending on the lab, it should be less  
17 than two to five, and his came down to normal with his  
18 course of hyperbarics.

19 So that provides some fertile ground for  
20 further study. We have since completed a placebo  
21 controlled double-blind trial in which the physician  
22 nor the parent knew which child was getting  
23 hyperbarics versus sham, and we did measures  
24 afterwards, and we were able to show that the children  
25 who had the real hyperbaric treatment were more likely

MUMPER - CROSS

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1 to be in the improved or much improved category, and  
2 that the kids that did not get it were more likely to  
3 be in the worse or most worse category. The P value  
4 on that was .000 either 7 or 4, I'm not positive.  
5 That study is being written up and has not been  
6 published yet.

7 Q All right. So just to be clear, the article  
8 that's listed on your CV was the original pilot study  
9 that you did?

10 A That's correct.

11 Q And the subjects in that study were who?

12 A Patients recruited from my clinic and Dr.  
13 Rosignol's clinic.

14 Q Okay. And there were no controls in that  
15 study, is that correct?

16 A That's correct. It was a pilot study with  
17 no controls. Absolutely.

18 Q And the subsequent study that you did that  
19 was the placebo double-blinded trial, that has not  
20 been published yet?

21 A That is correct.

22 Q Okay, so that obviously has not been peer  
23 reviewed either?

24 A That's correct.

25 Q The second article that you've listed on

MUMPER - CROSS

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1 your CV is a paper that deals with material RH  
2 negativity?

3 A That's correct.

4 Q And it appears that it was -- well, let me  
5 ask you. What was your participation in that study?

6 A In that study, I collected patients from my  
7 clinic. I have a huge population of  
8 neurodevelopmentally normal kids in my general peds.  
9 practice, and then I have a lot of children with ADD,  
10 ADHD and autism.

11 My anecdotal impression from taking  
12 histories for several years was that kids with autism  
13 tended to have more RH negativity in their moms than  
14 in the background population. I wanted to test that  
15 hypothesis because there is a lot of potential recall  
16 bias when we go back and look at our patients because  
17 we tend to either remember the good ones or the bad  
18 ones in terms of -- not in terms of value judgments,  
19 but in terms of outcomes.

20 And when we looked at my clinic, even though  
21 the background population in Lynchburg has a -- the  
22 moms are RH negative about 12 percent of the time, if  
23 you looked at my kids that were neurodevelopmentally  
24 disabled that number was 28 percent of the mothers  
25 were RH negative.

MUMPER - CROSS

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1           The reason that that was potentially  
2           important is that there is types of Rhogam  
3           preparations, there are several -- Baro is one, Rhogam  
4           is one, there is a third one that I can't recall the  
5           name of -- have differing levels of thimerosal. The  
6           thimerosal was taken out in 2003.

7           So I looked at my population and then  
8           independently Dr. Mark Geier was looking at his  
9           population of patients. He actually had a much  
10          greater number of -- he had a huge number of moms that  
11          he had RH negativity status on, so he could determine  
12          the background for his population, and he -- in his  
13          patients, I think it was something like 26.4 or 26.8  
14          percent of the mothers of the neurodevelopmentally  
15          disabled kids were RH negative compared to the  
16          background rate around 10 or 11 in his mothers of the  
17          neurodevelopmentally normal children.

18          Then we did a further analysis and looked,  
19          after 2003, when Rhogam no longer had thimerosal, and  
20          in my population of kids that were born at a time when  
21          they would have gotten the thimerosal-free Rhogam, or  
22          Baro, the number of them who had RH negative moms went  
23          to the background rate of around 13 percent.

24          So it was just a way of using my clinical  
25          experience to try to inform the science about

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1 something that I could do, you know, essentially with  
2 no funding. It was just a matter of going through our  
3 records and having the staff pull out this  
4 information, contact the families.

5 Q Now, you mentioned Mark Geier. Was he also  
6 involved with this study?

7 A He was the one who had the other set of  
8 kids, and he and his son David were the ones that did  
9 the writing of the paper essentially.

10 Q Okay, so the Geiers were also authors on  
11 this paper with you?

12 A That's correct.

13 Q Now if we could look at the next page of  
14 your CV, you list a number of research projects that I  
15 assume are ongoing in your clinic, is that correct?

16 A That is correct.

17 Q Okay. Have you completed any of the  
18 research projects that are listed on this page?

19 A The first study, the code has been broken,  
20 and the paper is in the process of being written. The  
21 second study, the paper has been written and is in  
22 press, in peer review right now. The third study  
23 actually got wrapped into the second study, so in that  
24 we ended up using -- instead of two separate studies  
25 we did one study so that's the one that's in press.

MUMPER - CROSS

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1           The evaluation of hyperbaric oxygen therapy  
2           is the one that I told you we've completed and we're  
3           in the process of writing. The evaluation of  
4           reliability of multiple labs utilizing split samples,  
5           the samples have been obtained, and received back, and  
6           are currently with the statistician who is analyzing  
7           the inter-sample reliability. And in the porphyrins,  
8           we are still collecting normal controls.

9           One of the experiences we have is that we  
10          get very eager parent participation from the autism  
11          community. It's more difficult to get the control  
12          patients to offer bodily fluids.

13          Q       The paper that you said is in press, in  
14          which journal is that going to be published?

15          A       You know, I don't know. Dr. Vojdani is the  
16          first author on that one, so I have not seen him since  
17          the day in conference, and I don't know.

18          Q       Okay. And the project regarding the  
19          evaluation of the reliability of the multiple labs,  
20          which labs were you evaluating?

21          A       I won't be able to remember them all. The  
22          Autism Research Institute funded a study, and the labs  
23          that I can recall that we looked at are Metametrix,  
24          Genova, Vitamin Diagnostics, Immuno Labs, Great  
25          Plains, and I believe that there are two more. It was



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1 a two-site study. There are two more, I think, that  
2 was at the other site that I can't recall.

3 Q Why did you select those labs?

4 A Because a lot of our clinicians utilize  
5 those labs. They tend to look at functional measures.  
6 We get a lot of criticism from mainstream that the  
7 values aren't reliable, so we wanted to send split  
8 samples that were sent in under two fake names from  
9 the same -- one fake name and another name from the  
10 same patient drawn at the same time under the same  
11 circumstances.

12 Q Did those labs know they were involved in  
13 the study?

14 A No, they did not.

15 Q They may know now.

16 A Thank you.

17 Q Sorry.

18 A Now you understand why we have trouble doing  
19 research.

20 Q Do you have any preliminary results from  
21 that study?

22 A I will tell you that I have looked at the  
23 split samples, and the one that sticks out in my  
24 memory, I was one of the subjects, one of the control  
25 subjects, I was actually very, very pleased at the

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1 split sample reliability of Metamatrix Labs. I know  
2 the director there, Dr. Lord, and he has written some  
3 very good books, and when we sent analytes, the  
4 typical pattern was that the numbers were usually not  
5 off by more than one-tenth of the measure, and that in  
6 a specimen where 25 or 30 things were analyzed the  
7 vast majority of them looked quite good.

8 But I'm not a statistician, so I can't just  
9 say I eyeballed it and it looked good to me. So we  
10 sent it off to the statistician and that's where it  
11 is. So I would really prefer to reserve final  
12 judgment on that until the numbers are in.

13 Q Did you order a full battery of tests or  
14 were there specific tests that you were asking be done  
15 on the samples that were submitted?

16 A We looked at tests that our doctors  
17 frequently order, and then we tried to send those to  
18 the tests to the labs so that we get an idea of how  
19 much we could either rely or not rely on the labs that  
20 we're doing.

21 Q And when you say the tests that the doctors  
22 frequently order, can you give us examples of this?

23 A Yes, I can give some examples. Plasma amino  
24 acids; urine organic acids; food allergy testing. I  
25 think the one that went to Vitamin Diagnostics might

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1 have been either a nutrient panel or a central fatty  
2 acid panel, I can't recall for sure. I think that my  
3 colleagues sent porphyrins to Metamatrix, urinary  
4 porphyrins, and that's all I can really recall in  
5 terms of going on the record for.

6 Q The urinary porphyrins testing, is that the  
7 same testing that is being done by the Nataf Lab?

8 A It is the same type of test, but it is being  
9 done in a different place.

10 Q Okay. I would assume you don't consider  
11 yourself a research scientist, is that correct?

12 A That's correct. I consider myself a  
13 clinician.

14 Q So would it be fair to say that most of your  
15 opinions regarding autism in relation to thimerosal-  
16 containing vaccines relies on the research of others?

17 A That would be correct.

18 Q Okay. I would like to ask you then about  
19 some of the literature and articles that you've cited  
20 as support for your opinions in this case.

21 A Okay.

22 Q And the first one I wanted to ask you about  
23 is the Stern article that is Petitioner's Master List  
24 No. 131. And you cite this article in your report for  
25 the proposition that one out of six children born

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1 today is predicted to have blood mercury levels high  
2 enough to impair a neurological function.

3 And I looked through the Stern article and I  
4 was unable to find that conclusion. Can you tell me  
5 where you find it?

6 A Can you blow up the abstract for me, please?

7 Q We can actually hand you a copy of the full  
8 article if that would be helpful.

9 A Okay.

10 (Pause.)

11 I do not see the one in six statistic there.

12 Q And this paper deals with methyl mercury,  
13 correct?

14 A That is correct.

15 Q And it actually dealt with a method for  
16 estimating mercury concentration in core blood based  
17 on a pregnant woman's intake of methyl mercury  
18 primarily through fish consumption, correct?

19 A That's correct.

20 Q And this article did not discuss the  
21 neurological outcomes of the children after they were  
22 born, did it?

23 A That's correct.

24 Q So this paper does not specifically say that  
25 one out of six children born today is predicted to

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1 have a blood mercury level high enough to impair  
2 neurological function, is that right?

3 A I believe that when the paper has been  
4 quoted by the agencies, they talk about one in six  
5 children being at risk, but you're correct. It does  
6 not specify the way that you mention.

7 Q Thank you. Now let's look at the Rowland  
8 article, which is Petitioner's Master List 187, and in  
9 both of your reports in this case you state that, "It  
10 is documented in the medical literature that  
11 antibiotics potentiate the toxicity of mercury."

12 Is the Rowland article the literature that  
13 you were referring to?

14 A The Rowland article, as I recall, deals with  
15 methyl mercury, and the antibiotics since they play a  
16 role in demethylating methyl mercury and helping the  
17 body excrete it is relevant in terms of methyl  
18 mercury. There is other information from a guy named  
19 Mark Lowe or Mark Lovell that I've learned of through  
20 Dr. Boyd Haley who did work on antibiotics and  
21 thimerosal directly.

22 The issue here is not that we are arguing  
23 that thimerosal has to be acting in isolation. One of  
24 the things that we at DAN are continually trying to  
25 take into account is that our kids don't live in a

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1 test tube and that there are other potential sources.  
2 And so when we are taking a careful and complete  
3 environmental history, we do include potential sources  
4 for methyl mercury also. One of the children that I  
5 was asked to review did have fish sources.

6 Q Why do you take into consideration sources  
7 of methyl mercury as well?

8 A Because I think that I can't be in good  
9 conscious entertaining the idea that thimerosal in  
10 vaccines is going to be a cause of I don't do a  
11 conscientious job of making sure that other sources  
12 couldn't be contributing to the mercury load.

13 Q So it's your opinion that other sources of  
14 mercury, including sources of methyl mercury, could  
15 also contribute to autism?

16 A To the problem, to synergistic toxicities  
17 that would impact on thimerosal. I do not have a case  
18 for arguing methyl mercury direct causation nor would  
19 I want to make that case.

20 Q Okay. What do you mean by the phrase  
21 "potentiate mercury toxicity"?

22 A That when there are other agents that would  
23 adversely impact the body's mechanisms for dealing  
24 with a thimerosal or an ethyl mercury load, the  
25 decrease in glutathione would make it unavailable to

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1 get rid of the mercury, and so the other agents would  
2 potentiate the toxicity.

3 Q You just used the term "the body's ability  
4 to deal with the mercury". What do you mean by  
5 "dealing with"?

6 A Excrete.

7 Q So here what we're really talking about is  
8 the body's inability to excrete the mercury, is that  
9 correct, when you say "potentiate mercury toxicity"?

10 A That's correct.

11 Q Is that a term that appears in the Rowland  
12 article?

13 A I don't know.

14 THE WITNESS: Does the Court want me to take  
15 the time to read it or can we do a search?

16 SPECIAL MASTER HASTINGS: Well, he just  
17 answered the question. She didn't know.

18 BY MR. JOHNSON:

19 Q Right. If you don't know, that's fine.

20 A Okay.

21 Q And you mentioned research that's being done  
22 either by a Mark Lowe or Mark Lovell that apparently  
23 was mentioned to you by Dr. Haley. Do you know if the  
24 term "potentiate mercury toxicity" is a term that Mr.  
25 Lowe or Mr. Lovell is using?

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1           A     His graph showed quantitative differences in  
2     cell death with thimerosal in various states -- when  
3     it was together with aluminum, when it was together  
4     with antibiotics, and when it was together with  
5     testosterone. So he had a very scientific  
6     quantifiable way of presenting his data.

7           Q     My question actually was whether he is using  
8     the term "potentiate mercury toxicity".

9           A     I have no idea.

10          Q     So when you say that antibiotics -- it's  
11     documented in the medical literature that antibiotics  
12     potentiate the toxicity of mercury, that's your  
13     interpretation of the literature?

14          A     That's correct.

15          Q     And you're not a toxicologist, is that  
16     correct?

17          A     That is absolutely correct.

18          Q     What antibiotics did William Mead receive  
19     during his first year of life?

20          A     I do not have them listed but I'm sure that  
21     they are in his checkup, so hang on.

22                     He received pediazole, amoxicillin, septr,   
23     amoxicillin, amoxicillin, amoxicillin, and augmentin.

24          Q     Did his receipt of those antibiotics  
25     coincide with his immunizations?



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1           Let me ask you first, is that something that  
2           you've looked at before right now?

3           A     It is something that I had looked at but not  
4           in terms of the actual date, also in terms of looking  
5           at the effects of antibiotics on gut flora around the  
6           time of the immunizations. So most antibiotics are  
7           given over a period of about 10 days. So I did a  
8           calculation.

9           (Pause.)

10           The immunizations that I would be most  
11           concerned about prior to -- I'm sorry. The  
12           antibiotics that I would be most concerned about in  
13           conjunction with immunizations would be the pediazole,  
14           which came in October after antibiotics were given in  
15           September; the case in December where antibiotics were  
16           given --

17           SPECIAL MASTER CAMPBELL-SMITH: Excuse me.

18           THE WITNESS: I'm sorry.

19           SPECIAL MASTER CAMPBELL-SMITH: Dr. Mumper,  
20           could you add a year?

21           THE WITNESS: Oh, sorry.

22           SPECIAL MASTER CAMPBELL-SMITH: Dates.

23           THE WITNESS: 9-17-98 would be the  
24           immunization, and 10-98 would be the pediazole; 12-3-  
25           98 would be the immunization and 12-98 would be the

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1       septra; and April 12, 2000, would be the immunization  
2       following along with augmentin in February.

3                Augmentin, which is a combination of  
4       amoxicillin and clavulanic acid, and which has been  
5       the main side effect, and it happens very frequently,  
6       is that kids get bad diarrhea from that. That is one  
7       of the antibiotics that the anecdotal collective  
8       experience of people in Defeat Autism Now regard as  
9       one of the ones that we're most concerned about, and  
10      no, we don't know the mechanism of that or why. It's  
11      purely pulled clinical observations.

12               BY MR. POWERS:

13              Q       So the first two that I believe you  
14      mentioned, the immunization actually occurred before  
15      the course of antibiotics, is that correct?

16              A       That is correct.

17              Q       So is it your opinion and testimony today  
18      that antibiotics administered weeks after an  
19      immunization can potentiate the mercury toxicity from  
20      thimerosal in the vaccine?

21              A       No. I don't think that I can say that.

22              Q       What antibiotics did Jordan King receive  
23      during his first year of life?

24              A       He did not, to my knowledge, have  
25      antibiotics.

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1 I would like to say that any of these  
2 mechanisms are not meant to be universal.

3 Q But you did in your report in Jordan's case  
4 include a statement that antibiotics could potentiate  
5 mercury toxicity, and I believe that you were actually  
6 referring to antibiotics that his mother took, is that  
7 correct?

8 A That is correct.

9 Q Are you aware of any study that has looked  
10 at the effects of maternal antibiotic use on the toxic  
11 effects of mercury in fetuses or infants?

12 A No.

13 Q Doctor, have you ever treated a child for  
14 mercury poisoning?

15 A Acute mercury poisoning, no.

16 Q What formal training have you received in  
17 toxicology?

18 A None.

19 Q Do you profess to have an understanding of  
20 the classic symptoms of autism?

21 A Yes.

22 Q And is it your opinion that the symptoms of  
23 autism and mercury poisoning are similar or that they  
24 share similar symptoms?

25 A I think that there is a fundamental

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1       misunderstanding in that when we are talking about the  
2       effect of thimerosal-containing vaccines on autism, we  
3       in no way are talking about acute mercury toxicity.  
4       We are talking about chronic, low and potentially  
5       cumulative exposures that lead to neuroinflammation.

6               So, no, I would in no way be putting forth  
7       the idea that any of us are seeing acute mercury  
8       toxicity.

9               Q       Isn't that in fact, though, how the  
10       hypothesis that thimerosal-containing vaccines cause  
11       autism began? And let me direct you to the Blaxill  
12       article which is an article that you've referenced in  
13       your report.

14              A       Right. And my response would be that, first  
15       of all, I know all three of these people and they are  
16       very bright; and second of all, that in the title they  
17       talk about plausible hypothesis; and third, that that  
18       is the way that science moves forward, is that you put  
19       a hypothesis, you test it, you refine it, and as time  
20       goes on the science declares itself, and the issues  
21       are better resolved.

22              Q       But you do cite this article in your report  
23       and you cite it for the statement that, "Mercury has  
24       myriad manifestations of toxicity, depending on the  
25       biochemical individuality of the victim, route of

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1 exposure, dose effects and synergistic toxicities."

2 Is that correct?

3 A Yes, and I stand behind that statement.

4 Q And you mention that you know all three of  
5 the individuals who wrote this article. They are  
6 affiliated with the organization called "Safe Minds."

7 Is that right?

8 A That is correct.

9 Q And according to the article, Safe Mind  
10 stands for "Sensible Action For Ending Mercury-induced  
11 Neurological Disorders." Is that right?

12 A That is correct.

13 Q And I believe that you mentioned that this  
14 article was published in the Journal of Medical  
15 Hypotheses", is that right?

16 A That is correct.

17 Q That is not a peer-reviewed journal, is that  
18 correct?

19 A That is correct.

20 Q You mentioned that you know Martin Blaxill.  
21 Does he hold an advanced science degree?

22 A Not to my knowledge.

23 Q In fact, his degree is in business  
24 administration, is that right?

25 A That's correct, and he's brilliant.

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1 Q But he's not a scientist.

2 A That is true.

3 Q And does Sally Bernard hold an advanced  
4 science degree?

5 A Not to my knowledge.

6 Q Okay. In fact, her professional background  
7 is in marketing?

8 A That is absolutely correct.

9 Q And the third author, Lyn Redwood, is a  
10 nurse practitioner, is that right?

11 A That's correct.

12 Q And her masters is in community health  
13 nursing?

14 A Right, but they all got the education of  
15 trying to figure out what happened to their child, and  
16 spending thousands of hours on the computer and doing  
17 research, and becoming advocates, and talking to  
18 Congress.

19 Q And I believe, based on your statement, all  
20 three of them have children with an ASD diagnosis, is  
21 that right?

22 A That is correct.

23 Q All right. And neither Martin Blaxill nor  
24 Sallie Bernard nor Lyn Redwood is a toxicologist, is  
25 that right?

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1 A Absolutely correct.

2 Q You also cite the Burbacher study in your  
3 report?

4 A Yes.

5 Q What is the significance of this study for  
6 your opinions in this case?

7 A This study was another one of those "ah-ha"  
8 moments for me because at the NIEHS hearing I got to  
9 hear Tom Burbacher present the study. The issues that  
10 concerned me there were the idea, which I thin is  
11 horrifying, that ethyl mercury crosses the blood-brain  
12 barrier and thereafter is converted to inorganic  
13 mercury. And they were able to demonstrate that  
14 inorganic mercury would stay in the brain for a very  
15 long half-life, probably several decades, Tom said.

16 Even more interestingly, they did pick their  
17 monkeys to show effects that would mimic the childhood  
18 immunization schedule but they only went the monkey  
19 equivalent of about six months, and the amount of  
20 mercury in the brain suggested a model where with  
21 repeated even very low doses you could get  
22 potentiation of the effects and you could get an  
23 accumulation of this inorganic mercury which would  
24 stay for decades, and our opinion is that that can  
25 serve as one of the triggers for this

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1 neuroinflammatory process that we're just learning  
2 about.

3 And so it's an animal model that informs my  
4 judgment because we are never going to be able to do  
5 the study where we take a thousand kids and give half  
6 of them thimerosal and don't give the others  
7 thimerosal, and then do brain biopsies. I don't know  
8 how we could ever get direct evidence in human  
9 children.

10 So we are left with looking at models from  
11 the animal kingdom, and models in the lab to inform  
12 the mechanisms and then to put it together with the  
13 clinical presentations that we are observing.

14 Q You would agree that this study was not  
15 concerned with the toxic effects of mercury, is that  
16 right?

17 A The study was to compare IV -- I'm sorry --  
18 IM thimerosal with PO methyl mercury, and to look at  
19 what happened in the brains and with the toxicology of  
20 the pharmacokinetics of that, right?

21 Q Yes, this was a pharmacokinetics study, is  
22 that right?

23 A Yeah.

24 Q Okay. And the study was designed to compare  
25 the blood and brain levels of mercury in infant



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1 monkeys exposed orally to methyl mercury or via  
2 intermuscular injection to ethyl mercury in the form  
3 of thimerosal-containing vaccines, is that right?

4 A Agree.

5 Q Would you agree that the study found that  
6 methyl mercury through oral ingestion and ethyl  
7 mercury through intermuscular injection were both  
8 readily absorbed and distributed into the blood and  
9 brain?

10 A Can you give me the abstract on that?

11 Q Yes, we would be happy to.

12 A Thank you.

13 MR. POWERS: Excuse me. I just want to make  
14 sure. Dr. Mumper, do you have the entire paper there?

15 THE WITNESS: Yeah. I asked for the  
16 abstract but she gave me everything.

17 MR. POWERS: Thank you.

18 SPECIAL MASTER HASTINGS: What's the  
19 reference list on that study again?

20 MR. JOHNSON: Sorry, Special Master. It's  
21 Petitioner's Master List No. 26.

22 SPECIAL MASTER HASTINGS: Twenty-six. Thank  
23 you.

24 THE WITNESS: Okay. So your question as I  
25 remember it was that both methyl and ethyl got to the

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1 brain?

2 BY MR. JOHNSON:

3 Q And to the blood.

4 A And to the blood. Yes.

5 Q Okay. Would you agree that the study showed  
6 that total mercury, meaning organic plus inorganic,  
7 was cleared from both blood and brain faster after  
8 thimerosal-containing vaccine exposure than after  
9 methyl mercury exposure?

10 A Yes, I did.

11 Q And would you agree that the levels of total  
12 mercury measured in the blood and brain were much  
13 lower after a thimerosal exposure than after a methyl  
14 mercury exposure?

15 A I think that pretty much comes from the  
16 abstract, so, yes, I agree with that.

17 Q All right. And would you agree that the  
18 authors concluded that methyl mercury is not a  
19 suitable reference for risk assessment from exposure  
20 to methyl mercury in the form of thimerosal-containing  
21 vaccines?

22 A Yes, definitely.

23 Q And would you agree that the study contains  
24 no conclusion about whether inorganic mercury is more  
25 or less dangerous than organic mercury?

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1           A     Probably it does not have that conclusion  
2     because it's just looking at the kinetics between the  
3     two.

4           Q     Right, so the --

5           A     That is correct.

6           Q     It wasn't looking at toxic --

7           A     Right.

8           Q     It was a pharmacokinetics study.

9           A     Right. Correct.

10          Q     And you agree that the study contains no  
11     conclusions as to whether mercury from thimerosal-  
12     containing vaccines causes autism?

13          A     That is correct.

14          Q     All right. The next study that I want to  
15     discuss that's cited in your report is the Hornig  
16     study.

17          A     Yes.

18          Q     And this is Petitioner's Master List No. 15.

19          A     Yes.

20          Q     What is the significance of this paper to  
21     your opinions in this case?

22          A     The Mattie Hornig study looked at a special  
23     strain of mice and gave thimerosal on doses that were  
24     meant to mimic the childhood vaccine schedule. The  
25     thing that I found extraordinary in hearing her

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1 present this several times was the way that through  
2 animal measures of behavior that are very well worked  
3 out for people who study rats or monkeys or whatever,  
4 she was able to demonstrate that a certain strain of  
5 mice when given this thimerosal exhibited behaviors  
6 that were very dramatic and looked very autistic.

7 The mice started getting OCD behaviors and  
8 they would like claw through each other's skulls  
9 instead of grooming each other, and the significance  
10 of that argues to biochemical individuality being  
11 important when we are trying to decide about the  
12 potential damages of a neurotoxin in vaccines because  
13 there are different susceptibilities, different -- a  
14 given dose for one child might be handled well whereas  
15 it wouldn't for another child.

16 Specifically, since this was an autoimmune  
17 strain of mice, it was relevant to me because so many  
18 of my patient histories the mother has lupus or the  
19 mother has multiple sclerosis, or there is a history  
20 of celiac disease, or there is a history of rheumatoid  
21 arthritis.

22 So we find that our patients tend to have a  
23 tendency toward autoimmunity, and so I thought it was  
24 a provocative study on that basis.

25 Q You mentioned that this was in a particular

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1 strain of mice.

2 A That's correct.

3 Q And that was a strain that was an autoimmune  
4 strain, is that what you said?

5 A Right. Autoimmune disease-sensitive mice.

6 Q The mechanism that is being proposed in this  
7 case is not an autoimmune mechanism, is it?

8 A That's correct. So, as I mentioned, my  
9 issue here is to try to argue for biochemical  
10 individuality and to hope to move this country toward  
11 recognizing that there may be individual variations in  
12 how children respond to immunizations such that we  
13 wouldn't -- shouldn't have, in my opinion, a one-size-  
14 fits-all vaccine schedule, but we should potentially  
15 take factors into consideration once we identify what  
16 they are.

17 Q When you say moving this country towards  
18 recognizing that idea, is it your opinion that the  
19 country, and I assume you're talking about the medical  
20 community in this country, does not generally  
21 recognize that idea at this time?

22 A I am having conversations with people at the  
23 American Academy of Pediatrics. Right now they do  
24 tend to promote a one-size-fits-all vaccine schedule,  
25 but I am hopeful that there will in the future --

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1 future decades perhaps -- be some variability based on  
2 individual, for example, immune status, or as we  
3 develop more with knowing genos, potentially that  
4 could feed into it.

5 Q I'm not sure I got a clear answer to my  
6 question. My question was, does the medical community  
7 generally recognize that idea, and I believe the  
8 answer was no.

9 A No.

10 Q Is that correct? Thank you.

11 Am I correct that another lab has recently  
12 attempted to replicate the results of the Hornig  
13 study?

14 A You know, I saw that in one of the expert  
15 reports, and I regret that I have not read the paper  
16 that allegedly refutes it.

17 Q Okay, and that's the Berman article, which  
18 is Respondent's Master List No. 42?

19 A Yeah.

20 Q So you have not read this paper?

21 A No, but if you have a copy, I would love to  
22 read it tonight.

23 Q We will be happy to provide it to you.

24 A Thanks.

25 Q Dr. Hornig presented her study to the 2004

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1 IOM committee that was investigating the alleged link  
2 between autism and thimerosal-containing vaccines, is  
3 that right?

4 A That's correct. I was there.

5 Q And do you agree that the IOM concluded that  
6 the relevance of the study was difficult to assess  
7 because the clinical points looked at in the study  
8 were not shown to be comparable to autism in humans?

9 A Yes, I do recall they said that.

10 Q Okay. In other words, the IOM concluded  
11 that even if the study showed that thimerosal injury  
12 of the nervous systems in these inbred mice, those  
13 results could not be extrapolated to conclude that  
14 thimerosal causes autism in human, is that right?

15 A That is the substance of their opinion, yes.

16 Q All right. I now want to move to actually  
17 two articles that are related that you reference in  
18 your report. These are the Nataf article, which is  
19 Petitioner's Master List No. 65.

20 A Yes.

21 Q And the Woods article, which is Petitioner's  
22 Master List No. 45.

23 A Okay. You know, if I could have a paper  
24 copy. I'm having trouble reading the screen with my  
25 eyes.

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1 Q Okay. And whenever you are ready, if you  
2 wouldn't mind just explaining why you referenced these  
3 articles in your report.

4 A The Nataf article was relevant because we  
5 look at porphyrin pathways as a way of trying to  
6 assess the effects of mercury on this very vital  
7 pathway that affects both heme synthesis and liver  
8 products, and the porphyrin pathway is one that Dr.  
9 Woods has studied for about three decades now, I  
10 think, and the Nataf Lab had developed a way of  
11 looking at that to try to give us some evidence of  
12 whether arsenic or mercury or lead or xenobiotics  
13 might be implicated in damaging that particular cycle.

14 And so it's been a clinical tool that many  
15 of my colleagues have used in a way to try to assess  
16 whether a child might have a mercury burden or lead  
17 burden, et cetera.

18 In the Nataf data that he initially did  
19 showed that in the population of French and Swiss  
20 kids, that there were big correlations between the  
21 abnormalities in the porphyrins and having  
22 particularly autism with seizures, but secondarily,  
23 autism, and that the control children had much lower  
24 levels of porphyrins.

25 Furthermore, they went on to treat with DMSA



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1 and demonstrate that there was a decline in the level  
2 of porphyrins over time, suggesting some improvement  
3 in those porphyrin cycles. So that's why I included  
4 his paper since it's something that we used.

5 Dr. Woods' paper, looking at genetic  
6 polymorphisms, I was including to raise the issue of  
7 individuality, genetic predisposition in the way that  
8 humans might process a known toxin.

9 Q I think you mentioned that you use or you  
10 order these porphyrin tests in your own practice. Is  
11 that right?

12 A Yes, I do some.

13 Q And do you find them to be a reliable  
14 measure of mercury toxicity in autistic patients?

15 A You know, I'm split on that now, because I  
16 think that they are good at showing differential  
17 toxicities, but the thing that is worrying us now is  
18 that we have not really looked at a lot of control  
19 children, and we are starting to do that, and finding  
20 that some normal children actually have abnormal  
21 porphyrins too.

22 So when Dr. Nataf had this population in  
23 France and in Switzerland, it seemed that in that  
24 population of kids there was a clear difference  
25 between the controls and the kids with autism. We

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1 somewhat accepted that in importing it to this  
2 country, but we never really proved that the same  
3 would be true for America.

4 So, you know, geographic variability does  
5 exist, and so now I feel like we need to study that.  
6 So I think it is a valuable test, but we try to  
7 interpret all our tests in that kind of context.

8 Q Would you say that your confidence in the  
9 reliability of this test is decreasing?

10 A My main concern is that as more data comes  
11 out about country differences, and as I've traveled  
12 more, when I first started using the Nataf Lab, I  
13 hadn't really traveled as many places, and now I have  
14 a much better appreciation for the different, not only  
15 environmental components, but also the different  
16 genetic components in different countries.

17 So it makes me less eager to generalize from  
18 another country's labs. So less confident over time  
19 because of the geographic variability.

20 Q And I think we saw in your CV that you're  
21 actually doing a research project on this issue in  
22 your own practice. Is that right?

23 A That's right.

24 Q Do you have any results from that research?

25 A Well, I think I mentioned that we're waiting

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1 on controls, and the results in our autism patients  
2 show a significant proportion of them do have abnormal  
3 porphyrins.

4 Q But you have not been able to replicate Dr.  
5 Nataf's results?

6 A No, because I don't have enough controls  
7 yet.

8 Q And you have seen evidence that lead you to  
9 believe that Dr. Nataf's results may not be replicable  
10 in all locations, is that what you are saying?

11 A That would be a fair statement, yes.

12 Q Now, we don't have any porphyrin tests in  
13 either the William Mead or Jordan King cases, is that  
14 right?

15 A That's correct, and you know, John Green was  
16 using the technology that he had available to him.  
17 Back in 2001, so much of the science had not even been  
18 done, much less published.

19 Q Would there be any benefit in doing those  
20 tests on either William Mead or Jordan King now?

21 A It would be very difficult to interpret  
22 because it would be many years after the presumed  
23 exposure.

24 Q So it would not measure exposures from -- I  
25 guess let me ask you. How long after an exposure

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1 would you believe that the test would no longer be  
2 helpful?

3 A Yeah. I don't know the answer to that  
4 question.

5 Q Okay. A matter of weeks?

6 A I don't know the answer to the question.

7 Q So you can't put any kind of time limit on  
8 it at all?

9 A I will not speculate in a proceedings of  
10 this much importance.

11 Q Would the test reflect any ongoing exposure  
12 that Jordan King and William Mead might have?

13 A Potentially. Yeah, potentially.

14 Q Would you agree that many substances,  
15 including metals and other chemicals, can alter  
16 urinary porphyrin excretion patterns?

17 A That's correct.

18 Q And you mentioned Dr. Woods' work and you  
19 discussed its relevance to your opinions, but you  
20 would agree that Dr. Woods does not mention autism or  
21 autistic spectrum disorders anywhere in his studies.  
22 Is that right?

23 A That's correct. We have a collaboration  
24 with him because of his extraordinary expertise in  
25 porphyrins. He would never pretend to be an expert in

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1 autism.

2 Q Okay. So Dr. Woods makes no claim about an  
3 association between porphyrin patterns and thimerosal  
4 as the cause of autism, is that right?

5 A Not to my knowledge.

6 Q And would you agree that the Nataf study did  
7 not measure the presence of mercury in the urine,  
8 blood or any place else in the body to show an  
9 association between the presence of mercury and the  
10 porphyrin profile?

11 A That's correct.

12 Q And would you agree that most pediatricians  
13 do not perform porphyrin testing to diagnose mercury  
14 poisoning?

15 A That would be correct.

16 Q And would you agree that porphyrin testing  
17 is not used by most pediatricians as part of the  
18 workup of autism?

19 A That is correct.

20 Q And would you agree that porphyrin testing  
21 does not tell you the amount of mercury a child was  
22 exposed to?

23 A That's correct.

24 Q And porphyrin testing does not tell you the  
25 amount of mercury that is in the brain of a child. Is

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1 that right?

2 A That is correct.

3 Q In fact, porphyrin tests would only reflect  
4 the presence of mercury in the body generally, right?

5 A The body generally meaning that most of it's  
6 going to be sequestered in fatty tissue.

7 Q Okay. So porphyrin testings do not provide  
8 any evidence that there is mercury in the brain. Is  
9 that right?

10 A Oh, that's correct.

11 Q And would you agree that there are no  
12 porphyrin tests that were accepted as diagnostic tests  
13 for mercury in the brain?

14 A I wouldn't know if that were true or not.

15 Q But to your knowledge you don't know of any  
16 such tests?

17 A That's correct.

18 Q And would you agree that neither the Woods  
19 nor the Nataf studies dealt specifically with  
20 thimerosal from vaccines?

21 A Yes, I would agree with that, and in fact,  
22 we make the point when we teach the use of porphyrins  
23 that it does not tell you where the mercury came from  
24 or where the lead came from.

25 MR. JOHNSON: Special Masters, I'm about to

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1 get into my next topic, so this may be a logical  
2 breaking point for the day.

3 SPECIAL MASTER HASTINGS: That seems  
4 reasonable. Why don't we break at this time then. We  
5 will end our session for today, and we will start  
6 again at 9 a.m. with Dr. Mumper still on the witness  
7 stand.

8 We stand adjourned. Thank you, all.

9 (Whereupon, at 4:40 p.m., the hearing in the  
10 above-entitled matter was recessed, to reconvene at  
11 9:00 a.m., Friday, June 16, 2008.)

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REPORTER'S CERTIFICATE

DOCKET NO.: 03-584V, 03-215V  
CASE TITLE: In Re: Claims for Vaccine Injuries  
HEARING DATE: June 15, 2008  
LOCATION: Washington, D.C.

I hereby certify that the proceedings and evidence are contained fully and accurately on the tapes and notes reported by me at the hearing in the above case before the United States Court of Federal Claims.

Date: June 15, 2008

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