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UNITED STATES DISTRICT COURT  
DISTRICT OF NEW JERSEY  
CASE NO. 03-4837 (DMC)

- - - - -

UNITED STATES OF AMERICA EX REL.  
DR. HELENE Z. HILL,  
Plaintiffs,

vs.

UNIVERSITY OF MEDICINE AND  
DENTISTRY OF NEW JERSEY, DR. ROGER  
W. HILL and DR. ANUPAM BISHAYEE,

Defendants.

- - - - -

DEPOSITION OF: EDOUARD AZZAM, MD  
December 12, 2008

TAYLOR & FRIEDBERG  
Certified Shorthand Reporters  
120 Washington Street  
Morristown, New Jersey 07960  
E-mail: csr@taylorfriedberg.com  
973-285-0411

TRANSCRIPT of the deposition of  
EDOUARD AZZAM, MD, called for Oral Examination in the  
above-entitled action, said deposition being taken  
pursuant to Superior Court Rules of Civil Practice, by  
and before CAROL T. PERRELLI, a Certified Shorthand  
Reporter, License No. XI01008, and a Notary Public of  
the State of New Jersey, at the offices of McElroy,  
Deutsch, Mulvaney & Carpenter, Esqs., Gateway 3,  
Newark, New Jersey, on Friday, December 12, 2008,  
commencing at 9:28 a.m.

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2 A P P E A R A N C E S:

3

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10

11 ALSO PRESENT: DR. HELENE Z. HILL

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WITNESS                      DIRECT    CROSS    REDIRECT    RECROSS

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EDOUARD AZZAM, MD

5

By MR. PINCUS                      5

6

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8

E X H I B I T S

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0005

1 EDOUARD AZZAM, MD,  
2 residing at 78 Sykes Avenue, Livingston, New  
3 Jersey, having been first duly sworn, was  
4 examined and testified as follows:

5  
6 DIRECT EXAMINATION BY MR. PINCUS:

7  
8 Q. Good morning.  
9 A. Good morning.  
10 Q. I know I had the pleasure of meeting  
11 you briefly a few minutes ago, but let me formally  
12 introduce my name. I'm Sheldon Pincus. I'm with the  
13 firm of Bucceri & Pincus. We're located in Clifton,  
14 New Jersey.

15 I am representing Dr. Hill in this  
16 matter, which she has brought in the United States  
17 District Court for the District of New Jersey,  
18 against the University of Medicine and Dentistry of  
19 New Jersey Dr. Howell, and Dr. Bishayee.

20 We're here to take your deposition  
21 today. Have you ever had your deposition taken  
22 before?

23 A. No. A deposition means --

24 Q. A deposition is a question and answer  
25 session, in its simplest form.

0006

1 There's a couple differences, though.  
2 The most important one is, you have been  
3 administered an oath to tell the truth.

4 A. Yes.

5 Q. While we're seated around this table in  
6 somewhat of an informal atmosphere, I want to assure  
7 you that the fact that you have been administered  
8 the oath, makes this somewhat of a solemn occasion,  
9 in that it is the equivalent of a court proceeding.

10 And we take this deposition because it  
11 may be used in various stages of the proceedings as  
12 they go on. So the important thing is, while

13 there's no judge sitting here, I want you to view it  
14 as though we were sitting in a court, and I'm simply  
15 going to ask you a series of questions, and I want  
16 you to attempt to answer those questions to the best  
17 of your ability.

18 A. Sure.

19 Q. I'm not here to trick you. This isn't  
20 any kind of marathon session. If you need a break  
21 or so, please don't be bashful.

22 A. Sure.

23 Q. I want you to tell me if you don't know  
24 the answer to a question. I don't want you to  
25 guess. It's not that kind of an exercise. It's a

0007

1 fact-gathering exercise, and if you don't know the  
2 answer, simply tell me. However, if you don't  
3 remember something, similarly, indicate, because I  
4 might be able to jog your memory by pointing you to  
5 a certain event or events, or to a document that  
6 would assist you to refresh your recollection and  
7 give a response to the question.

8 Do you understand that?

9 A. Yes, I do.

10 Q. Okay. If, for any reason, you don't  
11 understand a question, I want you to please tell me.  
12 I told you, I'm not here to trick you in any way,  
13 shape, or form, and I want to either rephrase the  
14 question or give it clarity for the purposes of  
15 allowing you to make a fully responsive answer. So  
16 don't be bashful, if you don't understand my  
17 question, because if you give a response, I'm going  
18 to assume that you understood the question, that you  
19 have the ability to respond to it, and that you have  
20 responded accurately and fully.

21 Do you understand that?

22 A. Yes.

23 Q. Okay. Now, don't take offense. Are  
24 you on any medications today?

25 A. No.

0008

1 Q. So, there's nothing that you have taken  
2 that might influence your ability --

3 A. No.

4 Q. -- to be responsive or tell the truth?

5 A. No.

6 Q. I also want you to follow this ground  
7 rule: Let me ask my question completely and I will  
8 afford you the courtesy of giving you the  
9 opportunity to respond. The reason why is because,  
10 our stenographer, Carol, who is sitting to my right,  
11 to your left, as you can see, is taking down  
12 everything that I'm saying, you're saying, and that  
13 anybody in this room will say, unless we go off the  
14 record and by agreement indicate that it shouldn't  
15 be transcribed.

16 A. Sure.

17 Q. Everything that is said here today is

18 going to be transcribed into a booklet. We call it  
19 a transcript. And as I indicated earlier, we have  
20 various uses for it as these matters, you know,  
21 proceed.

22           You're here as a fact witness today,  
23 and that's why I say this is a fact gathering, you  
24 know, exercise. So, you also need to give a verbal  
25 response, try not to think out loud before you do

0009

1 respond, because I don't want there to be confusion  
2 in the transcription between something that you may  
3 be thinking to yourself, for the purposes of  
4 formulating a response. Okay?

5           A.     Okay.

6           Q.     That explains the deposition.

7           During the course of the deposition,  
8 Mr. Flynn, who is seated to your right, to my left,  
9 who represents the defendants, the University, Dr.  
10 Bishayee, and Dr. Howell, may have objections to  
11 some questions that I ask.

12           If you hear him state objection, please  
13 hold your response, giving him the opportunity to  
14 set forth his objection on the record, and then  
15 we'll direct you whether to answer the question or  
16 not. That's something that lawyers do in these  
17 things because we don't have a judge sitting here to  
18 make a ruling on whether the question is proper or  
19 not, and so we may state objections to questions or  
20 to responses and, nonetheless, we may direct you to  
21 then go on and answer a question.

22           So I don't want you to be confused by  
23 that saying, what are these two guys doing? This  
24 seems crazy. But those are the rules of court that  
25 we have to follow, and I just wanted to acquaint you

0010

1 with them.

2           Do you understand that?

3           A.     Yes.

4           Q.     You think you'll be able to abide by my  
5 instructions here today?

6           A.     Yes, definitely.

7           Q.     And again, as I said to you, this isn't  
8 a marathon session. If you need a break, whether to  
9 use the men's room, you just want to get up and  
10 stretch, please don't hesitate. I'm not here to  
11 keep you an inordinate amount of time, but there are  
12 a series of documents and matters that I need to get  
13 through, and I'll try to move this thing along as  
14 best that I can.

15           Fair enough?

16           A.     Yes.

17           Q.     You're presently employed by the  
18 University of Medicine and Dentistry of New Jersey?

19           A.     Yes.

20           Q.     What is your academic rank?

21           A.     I'm a professor in the department of  
22 radiology.

23 Q. How long have you been employed at  
24 UMDNJ?

25 A. Since March 1, 2000.

0011

1 Q. Were you hired with the rank of  
2 professor?

3 A. No, assistant professor, on the tenured  
4 track, so I'm a tenured professor.

5 Q. How long did you serve as an assistant  
6 professor?

7 A. I served four years, which is the  
8 minimum period to go to the next step. I went to  
9 associate professor.

10 Q. And when was that?

11 A. In 2004. And then I did -- again, there  
12 was a period of four years, normally, and then I  
13 achieved the rank of professor.

14 Q. So that's rather recent?

15 A. Yes. As of July 1, 2008.

16 Q. What month was it in 2004 that you were  
17 afforded the rank of associate professor, please?

18 A. I do not recall, but it must be July.  
19 I think these things are July.

20 Lanie is on the committee. She may  
21 recollect.

22 Q. She can't speak during the deposition,  
23 so don't look to her in terms of providing you  
24 information.

25 Again, if you don't know a specific

0012

1 date, that's exactly what I want you to do.

2 A. Sure.

3 Q. Would you be kind enough to set forth  
4 your educational background for me?

5 A. Yes. Served -- I received my  
6 bachelor's degree in microbiology from the  
7 University of Calgary in Canada, and then I received  
8 my masters degree in physiology from the University  
9 of Manitoba, M-A-N-I-T-O-B-A, Canada, and then I  
10 received my doctorate degree, Ph.d degree from the  
11 University of Ottawa, and I subsequently did my  
12 post-doctoral studies at the Harvard School of  
13 Public Health in Boston.

14 (At this time there is a discussion  
15 held off the record.)

16 Q. So you were telling me you did post doc  
17 at Harvard School in Boston?

18 A. Yes.

19 (Curriculum vitae, was marked Exhibit  
20 Azzam 1 for identification)

21 Q. Dr. Azzam, I have marked an exhibit  
22 here as Azzam Exhibit 1.

23 Do you see that little tab that was  
24 placed?

25 A. Sure.

0013

1 Q. I'll give you these instructions as we

2 go along.

3 A. Exhibit means --

4 Q. Exhibit means it's a document. Okay?

5 And you'll also note that in the corner

6 here, there are a series of numbers. We have a lot

7 of documents. Attorneys have a cool little machine

8 that's called a Bates stamper and it allows us to

9 number the documents in series so we can keep track

10 of them.

11 A. Sure.

12 Q. So I may make reference to a Bates

13 stamp number in the course of your questioning, and

14 I just thought I'd tell you right now.

15 But for the moment, what you have

16 before you has been marked for identification

17 purposes as Azzam Exhibit 1.

18 Do you recognize this as your

19 curriculum vitae as of September 2007?

20 A. Yes.

21 Q. Yes?

22 A. Yes.

23 Q. And other than your having indicated to

24 me that, as of July 1, 2008, you were afforded the

25 rank of full professor, have there been any other

0014

1 material changes in your curriculum vitae that are

2 not otherwise delineated on this document?

3 A. Well, I obviously -- it has been a

4 whole -- over one year, so there are many, many

5 items that I've not listed here; new grants, federal

6 grants.

7 Responsibilities of where I

8 participated in, I think, that are worthy to be

9 included in my curriculum vitae, and they are not

10 listed here, but they occurred during 2008.

11 Q. So, insofar as-- aside from the change

12 in rank, how many other grants have you received?

13 A. One grant.

14 Q. One grant?

15 A. Yes.

16 Q. And what grant is that?

17 A. That's a sub award from the NIAID;

18 National Institute of Allergy and Infectious

19 Disease. That's a subcontract that I have to

20 generate bio markers of ionizing exposure, human

21 exposure to low dose ionizing radiation.

22 Q. You're the primary investigator on that

23 grant?

24 A. On the subcontract, yes, I am.

25 Q. Are there any co-investigators with you

0015

1 on that grant?

2 A. Yes.

3 Q. Who is that?

4 A. Dr. Hong Li.

5 Q. Spell, please.

6 A. H-O-N-G. Last name, L-I. And Deb,

7 D-E-B, K-U-M-A-R-P-A-I-N. Deb Kumarpain.  
8 Q. So, you have received one additional  
9 grant.  
10 Insofar as new responsibilities, can  
11 you sort of summarize them?  
12 A. I am the investigator.  
13 Q. I'm sorry. When -- you also said that  
14 in terms of material changes in your CV --  
15 A. Yeah.  
16 Q. -- that you have certain new  
17 responsibilities.  
18 A. Sure.  
19 Q. What -- in general, what are those?  
20 A. Well, one major responsibility that --  
21 following the charge from the undersecretary of  
22 science Ray Orbach, Dr. Orbach, I was invited by the  
23 U.S. Department of Energy to review the process that  
24 the U.S. Department of Energy uses to allocate  
25 grants, to review grants, to administer grants, and  
0016  
1 that I was on a committee where I was a reviewer,  
2 not only of the radiation related, but as well as  
3 the human Gnome of the artificial retina. So I was  
4 involved in these reviews.  
5 Of course, my responsibilities were  
6 primarily to review the US Department of Energy low  
7 dose radiation research.  
8 Q. Now, when you first came to New Jersey,  
9 that was from Canada?  
10 A. No, from Boston.  
11 Q. From Boston?  
12 A. Yeah.  
13 Q. When you first came to New Jersey, was  
14 that in or about, you know, March of 2000?  
15 A. Yeah.  
16 Q. And am I correct that during that  
17 period of time, you resided, for a period of time,  
18 in Dr. Hill's home. Is that correct?  
19 A. Yes. Dr. Hill invited me to stay in  
20 her home and, yes, I did.  
21 Q. For what period of time?  
22 A. This must have been -- I was in with  
23 Dr. Hill from Monday to Friday, from March till July  
24 when my family came from Massachusetts, and we  
25 purchased a home in Livingston, so that was July 15.  
0017  
1 That's when we took possession of the house.  
2 Q. During that period of time, do you  
3 recall her or you engaging in any discussions  
4 regarding Dr. Bishayee?  
5 A. Lanie was always -- Dr. Hill was always  
6 concerned about tissue culture habits of -- but at  
7 that period of time, no concern about Dr. Bishayee,  
8 that I recall.  
9 Q. So, I'm a little unclear insofar as to  
10 your response.  
11 You say that you recall during that



12 time period, March to July of 2000, Dr. Hill  
13 expressed some concerns about tissue culture habits?  
14 A. But not of Dr. Bishayee.  
15 Q. Okay. Fine.  
16 A. In general.  
17 Q. Fine.  
18 A. In general.  
19 Q. My question was specifically relating  
20 to Dr. Bishayee, and your recollection, if I  
21 understand you correctly, is that she did not  
22 express to you any concerns?  
23 A. Not that I recall.  
24 Q. At about that time?  
25 A. Yes.

0018

1 Q. Now, you say your wife came to New  
2 Jersey in or about July of 2000?  
3 A. Correct.  
4 Q. Your wife's name is Dr. Sonia deToledo.  
5 S-O-N-I-A; small d-e, capital T-O-L-E-D-O?  
6 A. Correct.  
7 Q. And she's employed by the University,  
8 too?  
9 A. That's correct.  
10 Q. And does she have academic rank?  
11 A. She's an adjunct assistant professor.  
12 Q. And did she hold that rank and/or title  
13 at the time she commenced employment with the  
14 University?  
15 A. Yes.  
16 Q. Did, in or about this time, you and  
17 Dr. Hill share any lab space?  
18 A. Me and Dr. Hill? We were all in the  
19 same laboratory space because my own space was not  
20 available yet, so we shared lab space in Room 451 of  
21 the F level at the medical sciences building.  
22 Q. Who else shared lab space?  
23 A. Dr. Howell, and Dr. Hill was working on  
24 a project with Dr. Howell.  
25 Q. And yourself?

0019

1 A. I was not working on that project.  
2 Q. But you were in that space?  
3 A. Yes, I was.  
4 Q. That I understand.  
5 And was your wife using that space,  
6 too?  
7 A. Yes.  
8 Q. And what about Dr. Bishayee? Was he  
9 using that space?  
10 A. Yes.  
11 Q. Was Dr. Lenarczyk there at that point  
12 in time, to your knowledge?  
13 A. No, not at that period of time of March  
14 to July, he was not there. I don't think he was  
15 there. I do not remember, but I'm definite he  
16 wasn't there between March and July.

17 Q. During that time, do you recall  
18 socializing with Dr. Hill?  
19 A. Oh, yes. Certainly.  
20 Q. And, again, during the time that you,  
21 and I assume your wife, also socialized with

22 Dr. Hill?

23 A. Between March and July?

24 Q. Yes.

25 A. No, Sonia was in Boston.

0020

1 Q. But subsequent to that point in time,  
2 did you remain social once you moved to Livingston?

3 A. Oh, yes. Yes. We shared meals and,  
4 certainly, yeah.

5 Q. When your wife was working in that lab  
6 space, did she express any concerns about  
7 Dr. Bishayee?

8 A. No. To answer your question is *no*,  
9 *unless you will ask me the question of when did I*  
10 *hear about the concern, then I will answer.*

11 Q. *Did she ever tell you that she didn't*  
12 *want Dr. Bishayee using something called a laminar*  
13 *air flow hood?*

14 A. No.

15 Q. *Did she ever express to you any*  
16 *concerns about his lab technique, or his cleanliness*  
17 *habits insofar as doing experimentation?*

18 A. *She expressed a concern about tissue*  
19 *culture in general in the Howell lab.*

20 Q. This was your wife?

21 A. No, my wife -- no. No.

22 Q. You say that you recall that Dr. Hill  
23 expressed a concern about tissue culture?

24 A. Yes.

25 Q. In general?

0021

1 A. A general concern.

2 Q. When was this, please?

3 A. That was when we used to walk in the  
4 morning, Dr. Hill, and Dr. George Hill, and myself,  
5 when I was staying in Dr. Hill -- in the Hills'  
6 house, we used to go for walks every morning, and I  
7 recall very clearly, Dr. Hill, Lanie, expressing the  
8 concern, general concern about tissue culture.

9 Q. What was the concern that she  
10 expressed?

11 A. The concern, we have to teach Roger and  
12 his people proper tissue culture habits.

13 Q. Can you be any more specific insofar as  
14 the nature of the discussion?

15 A. No. At that time -- at that -- that  
16 was it. That was it, yeah.

17 Q. What did you understand her to mean  
18 when she spoke about --

19 A. In general, about tissue culture, I --  
20 really, tissue culture is a -- I have my own habits

21 in tissue culture, so I -- so, everybody has his own  
22 habits.

23 Tissue culture is -- has so many  
24 variables, so I assume you have to follow many  
25 variables, but my variables might be different from  
0022

1 Dr. Hill's, from Dr. Howell's, from many other  
2 people.

3 Q. So --

4 A. But I didn't share my tissue culture  
5 hoods at the time. I had my own to observe with  
6 Dr. Bishayee, or Dr. Hill, or Dr. Howell were doing.

7 I know Dr. Hill and Dr. Bishayee were  
8 doing tissue culture, but I had my own hood that I  
9 cleaned. It was separate from the area that  
10 Dr. Bishayee -- it was at the same lab, but he was  
11 in an anteroom, so I don't see him.

12 I am focusing on my own work, and I did  
13 tissue culture myself at the time, and Dr. Hill was  
14 in a totally separate room, and did her own tissue  
15 culture.

16 I never cultured cells for  
17 Dr. Bishayee. I did take over from Dr. Hill a  
18 couple of times she went to New Hampshire and she  
19 said, if you wouldn't mind to passage my cells for  
20 me. That I did. But I never cultured cells for  
21 Dr. Howell or Dr. Bishayee for me to observe any of  
22 their work.

23 So, for me to pass a judgment, I don't  
24 like to pass a judgment on anyone.

25 Q. Okay.

0023

1 A. Yeah.

2 Q. And so you were responding to me right  
3 now, again, within the time frame of March to July  
4 of 2000. That was my understanding.

5 A. I never did tissue culture with  
6 Dr. Bishayee or Dr. Howell ever from 2000 until as  
7 of yesterday. Working on a tissue culture that I  
8 see what his people do, I never taught them to sub  
9 culture cells, or to culture cells.

10 Q. Notwithstanding that you never did any  
11 tissue culture with Dr. Howell or Bishayee, I take  
12 it you had occasion, just in the day-to-day workings  
13 of a lab to interact with Dr. Howell?

14 A. Interact with Dr. Howell?

15 Q. Yes.

16 A. Yes, definitely.

17 Q. Okay. Did Dr. Howell, in or about this  
18 time period -- I'm going to, by way of parameter,  
19 from March of 2000 until approximately in, you know,  
20 2001, did he ever express to you that there had been  
21 problems with Dr. Bishayee?

22 A. No.

23 Q. No?

24 A. No.

25 Q. Did he ever indicate to you in or about

0024

1 this time period that Dr. Hill had related  
2 suspicions?

3 A. No.

4 Q. This is where I'm going to -- with all  
5 due respect, let me ask, in fairness to you, the  
6 question first before you respond. Okay?

7 So let me -- let's go back and I'll ask  
8 you the question.

9 During this time period, did --

10 A. Which time period?

11 Q. Approximately March 2000 through 2001,  
12 did Dr. Howell ever indicate to you, or relate to  
13 you, that Dr. Hill had spoken with him regarding  
14 suspicions that she had of Dr. Bishayee making up  
15 data?

16 MR. FLYNN: Let me be clear, the  
17 beginning of 2001 or through 2001?

18 MR. PINCUS: Through 2001.

19 A. Through 2001? You mean, December 31 of  
20 2001?

21 Q. Yes.

22 A. I got to know that Dr. Hill had a  
23 concern about Dr. Bishayee exactly following the  
24 time that Dr. Bishayee -- that Dr. Hill went and  
25 submitted a formal complaint.

0025

1 Prior to that, as best as my knowledge  
2 would come, tells me I had absolutely no knowledge  
3 that they had serious issues among themselves. I  
4 got to know, I think -- and I got to know about this  
5 matter, actually probably most likely from Malik  
6 Lenarczyk, when he came to my office, that there has  
7 been a formal complaint. As much as my recollection  
8 will come, that I did not hear from Dr. Howell, no.

9 Q. Sitting here today, do you recall when  
10 it was that Dr. Hill submitted her formal complaint  
11 to the University regarding Dr. Bishayee or Dr.  
12 Howell?

13 A. Must be between March and -- March and  
14 June of 2001, I would say. Somewhere around that  
15 time.

16 Q. I'm going to represent to you for the  
17 purposes of moving matters along, and trying to  
18 pinpoint certain facts, that that occurred in early  
19 April of 2001. So, within the time frame. But I'm  
20 going to make that representation to you, so when I  
21 refer to the complaint, we're going to be focused on  
22 that point in time.

23 A. Sure.

24 Q. Now, you say that that's when you first  
25 learned about any complaints that Dr. Hill had?

0026

1 A. That is correct.

2 Q. But you also said a moment ago, that  
3 there was a point when Dr. Lenarczyk came to you and  
4 related something?

5 A. That must have been April 2001, so  
6 subsequent of Dr. Hill, I believe, submitting her  
7 complaint to whoever it was, I really do not know,  
8 within the University, but there has been a -- the  
9 concern of Dr. Hill. That's when I got to know that  
10 there is an issue in the lab.

11 Q. Okay. So, if I understood you  
12 correctly, it was only after your learning of the  
13 fact that Dr. Hill had submitted a formal complaint,  
14 that Dr. Lenarczyk came to speak to you?

15 A. That is correct, yeah.

16 Q. Was there anyone else present besides  
17 yourself and Dr. Lenarczyk at the time he spoke to  
18 you?

19 A. I'm not sure if Dr. Bishayee was there.

20 Q. Okay.

21 A. And I really -- I -- I used to work  
22 quite late. I still do work late.

23 Q. Welcome to the club.

24 A. Prior maybe to April, there was  
25 something going on between Lenarczyk and Bishayee.

0027

1 About 9:30 at night, both of them -- and I couldn't  
2 understand what it was between them, about some  
3 cells and things like that, and -- but I have no  
4 comprehension that they had any issues among each  
5 other.

6 I used to give them rides home to  
7 take -- to take them at that time. I don't even  
8 recall where Dr. Lenarczyk was, but I know where  
9 Dr. Bishayee was. Neither one had a car. I would  
10 drive them, but the little issue among each other --  
11 and I did not understand what it was. I was busy  
12 with my own work, but they had --

13 Q. Fair enough.

14 A. They were unhappy with each other a  
15 little bit, although they continued to talk to each  
16 other.

17 Who -- to answer your question, when  
18 Dr. Lenarczyk told me there has been a complaint,  
19 you know --

20 Q. So tell me --

21 A. -- something.

22 Q. Tell me what it was?

23 A. Dr. Bishayee was -- I think I got to  
24 know about it from Dr. Lenarczyk, but who was there  
25 when he told me -- I can picture him coming to my

0028

1 little office in 466. Who was there present, either  
2 him and I, or someone else, I do not really recall.  
3 If there was someone else, I would picture  
4 Dr. Bishayee being the person --

5 Q. Okay. Fair enough.

6 A. -- in there.

7 Q. Tell me what it was that Dr. Lenarczyk  
8 related to you during the course -- well, before I  
9 ask you that question, when he related to you that

10 there had been a complaint, as I understood you to  
11 say --

12 A. Right.

13 Q. -- did he do this -- did he have one or  
14 more than one conversation with you about that?

15 A. That particularly was, if, again, my  
16 recollection comes to me, that it was a very, very  
17 quick thing.

18 Q. Okay. Tell me what he said in that  
19 first conversation.

20 A. I think there has been a complaint  
21 but -- of Dr. Hill against work done by Anupam.

22 And as I say, it was a very, very quick  
23 exchange, that I didn't know the nature of the -- of  
24 what was the complaint. I had my own things to  
25 worry about. Either they were polite not to take my

0029

1 time or -- but it was very brief.

2 Q. Is there anything else that you can  
3 recall Dr. Lenarczyk relating to you during this  
4 conversation other than there had been a complaint?

5 A. That particular same day, no.

6 Q. Did he have any further conversations  
7 with you on other days relating to the complaint?

8 A. Conversations that -- again, with  
9 Dr. Lenarczyk, I think they were very brief  
10 conversations but, no. Saying, you know, I don't  
11 know about Anupam's work, having concerns about  
12 Anupam's work. That's all he had spoken to me.

13 Q. So, are you saying to me that he didn't  
14 go into details?

15 A. No.

16 Q. Are there any details or facts --

17 A. No.

18 Q. -- that he related to you that you can  
19 recall?

20 A. No.

21 Q. So, if he didn't relate facts or  
22 details, yet you recall him having other discussions  
23 with you about the complaint, what was it that he  
24 was discussing with you?

25 A. About the complaint? That he had

0030

1 concerns about Dr. Bishayee's work, but I never went  
2 into any detailed discussions with Dr. Lenarczyk,  
3 that I recall of.

4 Q. Okay. So, approximately, how many  
5 other conversations, beyond that first time when he  
6 came to your office, do you recall, or that you can  
7 approximate Dr. Lenarczyk spoke to you about the  
8 complaint?

9 A. Really, no extensive exchange with  
10 Dr. Lenarczyk.

11 Q. I'm asking, can you quantify it in  
12 terms of numbers?

13 A. Quantify it? It never went into any  
14 detail. I know that there were, I'll say, five.

15 Five. I had -- I had many encounters with  
16 Dr. Lenarczyk. I gave him rides, but --  
17 Q. Okay.  
18 A. -- but they were general discussions of  
19 a jovial nature where we exchanged jokes.  
20 Q. We don't have to go into that, because  
21 I want to focus.  
22 But your recollection is that -- so  
23 that there were approximately --  
24 A. Yeah.  
25 Q. -- five additional conversations --

0031  
1 A. Correct.  
2 Q. -- beyond the initial one, and without  
3 being able to -- without him relating specific  
4 detail, he expressed to you that he had concerns  
5 regarding Dr. Bishayee's work?  
6 A. Yeah. He expressed a concern, yeah.  
7 Q. But did he elaborate in any fashion --  
8 A. No.  
9 Q. -- in any of these as to what --  
10 A. No.  
11 Q. -- the basis of his concerns were?  
12 A. No.  
13 Q. Did you come to learn after the  
14 complaint was filed in early April by Dr. Hill, that  
15 Dr. Hill and Dr. Lenarczyk had followed or shadowed  
16 Dr. Bishayee's work in the lab for a period of time?  
17 A. Did I get to know that they shadowed?  
18 Q. Did you come to learn that they had  
19 done that?  
20 A. Yes, I did.  
21 Q. What was the source of your knowledge?  
22 A. I got to know that from Dr. Howell,  
23 yeah --  
24 Q. Okay.  
25 A. -- or probably from Dr. Hill as well.

0032

1 From both of them.  
2 Q. Let's first deal with Dr. Howell.  
3 How soon after the complaint by  
4 Dr. Hill was filed was it that Dr. Howell first  
5 spoke to you about this?  
6 A. I really do not remember exactly, but  
7 probably a week or two weeks after, and very briefly  
8 at that time, also.  
9 Q. What did he say to you?  
10 A. I do not remember that.  
11 Q. Fair enough.  
12 A. A few things I remember very clear,  
13 that Dr. Hill, Lanie, has a complaint about Anupam,  
14 but to -- exactly, the words that he said or the  
15 nature of the allegation, I don't think I --  
16 probably I learned more about this from Dr. Hill  
17 relating to me initially, then Dr. Howell relating  
18 to me.  
19 Q. Do you remember anything else that

20 Dr. Howell related to you in or about, you know, the  
21 period of April to July regarding Dr. Howell's  
22 complaint?

23 A. Probably, I did not get much details  
24 from Dr. Howell. I did not get much details.

25 Q. Okay.

0033

1 A. I -- yeah.

2 Q. What about Dr. Bishayee, did he relate  
3 anything to you?

4 A. No, he related, I understood, that  
5 there were something, but no specifics. No  
6 specific.

7 Q. What did Dr. Hill relate to you?

8 A. Again, that -- probably, that Dr. Hill  
9 mentioned fudging data.

10 Q. When did you have this conversation  
11 with Dr. Hill, as best you recall?

12 A. Again, exact time, I am not really  
13 sure. I'm trying to put in the time frame to make  
14 me remember is at what time -- at that same --  
15 whether it was in the same period that we were --  
16 Dr. Hill, Dr. Howell, myself, were in contact with  
17 Brook Haven National Lab, and we were putting the  
18 Department of Energy grant jointly, all of us  
19 together. And so it would have been during that  
20 period of time. I would say that this may have been  
21 in May?

22 We used to meet together. We went to  
23 Brook Haven. But exactly the timing may have been  
24 May, June. At that time. That -- probably  
25 that's -- of 2001? No, it should be subsequent to

0034

1 that, because in 2001, then, that must be  
2 subsequent, way subsequent. Not in 2001, because I  
3 was in Dr. Hill's house until July, sometime early  
4 July. I must have taken the week off, and at that  
5 time, I do not recall that we had these  
6 conversations of the allegation, although -- yeah --  
7 oh, no. That was 2000. 2000 that I was in  
8 Dr. Hill's house. So these events -- Dr. Hill filed  
9 the complaint in April. Yeah, so --

10 Q. April of 2001?

11 A. April 2001. So maybe Dr. Hill spoke to  
12 me. We exchanged more in May and June. May and  
13 June, I would say.

14 Q. Fair enough.

15 A. Yeah.

16 Q. Did you take any notes?

17 A. No, absolutely not.

18 Q. Fair enough. You were familiar with  
19 the fact that Dr. Hill, Dr. Bishayee, Dr. Howell  
20 were working on a grant from the National Institute  
21 of Health and Data about this time. Correct?

22 A. Correct. Even since 1999, before I  
23 came, and I participated in providing them with  
24 ideas --



25 Q. Okay.

0035

1 A. -- and cells to use biological systems.  
2 I am not on the grant, joint grant, but I think,  
3 intellectually, I provided them with important  
4 input.

5 Q. You weren't on the original grant.  
6 Correct?

7 A. No, I was not.

8 Q. And you weren't on -- were you then  
9 listed as a co-investigator at the time the grant  
10 came up for renewal?

11 A. I was, yes.

12 Q. And your recollection is that the grant  
13 came up for renewal in what year, sir?

14 A. The grant came up -- it's a five-year  
15 grant. He obtained it in 2000. Must be 2005.

16 Q. So, how did it come to pass, as briefly  
17 as you can tell me, that you came to be now the  
18 co-investigator on this particular NIH grant?

19 A. Certainly. I provided Dr. Howell with  
20 the system to culture cells in three dimension,  
21 three dimensional culture.

22 I put a lot of input for his post doc  
23 Massimo Pinto. So it came using the three  
24 dimensional tissue culture system. I developed that  
25 system for normal cells, and his post doc, Massimo

0036

1 Pinto, I did not participate in his work, but  
2 intellectually, I gave him the techniques of how to  
3 work.

4 We showed him how to use that system  
5 and Dr. Howell wanted to expand his work into novel  
6 avenues using human cells, and that's where comes my  
7 expertise, is in the human cells culture in a three  
8 dimensional architecture.

9 So I suggested using the human cells,  
10 the tumor cells, cancer cells. I suggested to him  
11 an invivo model using the testis model that he has  
12 expertise in.

13 So I said, why don't you use the testis  
14 model which you have and label cells and study what  
15 we call the bystander effect invivo. And the system  
16 that I provided him, and in which I have quite a bit  
17 of expertise, generated it not only to Dr. Howell,  
18 but to many other people in the US, and around the  
19 world, to culture cells under very controlled  
20 conditions in three dimension. So that's really my  
21 input.

22 Q. In preparation for your agreeing to  
23 serve as a co-investigator, is it fair for me to  
24 say -- and correct me if I'm wrong -- that you would  
25 have reviewed, you know, the initial grant?

0037

1 A. That I reviewed the initial grant? No,  
2 I read the initial grant. They sent me sections,  
3 both Dr. Hill and Dr. Howell, to read, but I made

4 corrections to them, and I put some input, all the  
5 input that they used with direct liver epithelial  
6 cells. These ideas came from me to use gap junction  
7 competent cells, and gap junction deficient cells,  
8 and their grant applications did not come from them,  
9 came from me.

10 Q. But did you review the --

11 A. No, I did not.

12 Q. You don't know what --

13 A. No.

14 Q. You didn't hear me ask the question.

15 So in fairness to you, let me ask the question.

16 So, you say that you -- you read the  
17 initial grant?

18 A. Sections --

19 Q. Sections of it?

20 A. -- were sent to me by them

21 electronically to Boston.

22 Q. And that would have been in or about  
23 1999?

24 A. 1999. That is correct.

25 Q. Okay. And -- but -- and then

0038

1 subsequent, when you became co-investigator in or  
2 about 2005, and for the purposes of, you know, as  
3 you've been so kind to do, outlined some of the  
4 suggestions that you made based on your areas of  
5 expertise --

6 A. Correct.

7 Q. -- is it fair for me to say that you  
8 reviewed what had been done up until that point in  
9 time?

10 A. I happen not to have reviewed. I never  
11 read Dr. Howell's grant in its entirety. I don't  
12 think I ever read it. I may have -- I did read  
13 sections of it, particularly the introduction, as I  
14 was preparing my own grant.

15 Q. Okay.

16 A. And the reason -- again, Dr. Howell's  
17 work consist of using incorporated radioactivity,  
18 radionuclides.

19 My work consist of exposing cells to  
20 external radiation, alpha particle radiation, which  
21 is different from the type of radiation that Dr.  
22 Howell uses.

23 So, to answer your questions, did I  
24 review Dr. Howell's particular grant that you are  
25 mentioning, did I review it? No, I did not.

0039

1 Q. Beyond that, however, what about the  
2 various experiments that had been undertaken between  
3 the grant being granted, or the proposal being  
4 granted, and the time when you became  
5 co-investigator? Did you familiarize yourself with  
6 various work and experiments that had been done in  
7 Dr. Howell's laboratory by either himself, or  
8 Dr. Bishayee, or Dr. Howell?

9           A.       We hold meetings, journal clubs,  
10 where -- really not from -- when Dr. Bishayee would  
11 present some of his data, which was not extensive at  
12 that time, I participated with Dr. Hill, Dr. Howell,  
13 Sonia, Dr. Bishayee and myself. We sat several  
14 times in Dr. Howell's office, and -- but at *that*  
15 *time, probably we discussed more survival curves*  
16 *that I obtained with incorporated, tritium,*  
17 *T-R-I-T-I-U-M, tritiated thymidine than what*  
18 *Dr. Howell's findings.*

19           I know about Dr. Howell's results.  
20 I -- through presentations, and absolutely and only  
21 through presentations in the journal club by  
22 Dr. Gerafhchenko, Massimo Pinto, Prasad Neti.

23           Q.       I'm still unclear. You were aware --  
24 were you aware of the fact that before your becoming  
25 co-investigator, that Dr. Bishayee had done a series  
0040

1 of experiments in the lab under the auspices of this  
2 grant? Just in general, you were aware of that?

3           A.       Yes.

4           Q.       You were further aware of the fact, in  
5 general, that Dr. Lenarczyk had done a series of  
6 experiments associated with this grant. Is that  
7 correct?

8           A.       Yes.

9           Q.       My question that I was attempting to  
10 focus you on was in anticipation of your agreeing to  
11 serve as a co-investigator on the renewal grant, did  
12 you review those experiments?

13           A.       No, I did not review the experiments,  
14 in the sense that I don't understand what you mean  
15 by "review".

16           Q.       Well, did you look at their lab  
17 notebooks?

18           A.       No, absolutely not. Never, ever did I  
19 look, and I never looked at anybody's lab book.

20           Q.       So, to the extent that they were doing  
21 certain experiments on a day-to-day -- from day to  
22 day, you're telling me that you didn't look those  
23 over for purposes of deciding --

24           A.       No.

25           Q.       -- whether to --  
0041

1           A.       No. I had my own research program to  
2 take care of, that I don't think my time -- or I  
3 would even -- this is one of my habits, to go and  
4 look at anybody's lab book.

5           Q.       Okay.

6           A.       I did not do that. Neither their lab  
7 book, or anybody's lab book for that matter.

8           Q.       Well, I'm just saying -- I'm not  
9 necessarily suggesting that that would be something  
10 unprofessional or unethical. I'm trying to  
11 understand.

12                    It seems to me when somebody agrees to  
13 serve as a co-investigator of a grant, you have to,

14 I would think, and you correct me if I'm wrong, come  
15 to some conclusion, or some opinion that you want to  
16 be associated with that?

17 MR. FLYNN: Objection to form.

18 Go ahead.

19 A. I agreed to serve as a co-investigator  
20 because the system -- and I was very crucial in  
21 helping Dr. Pinto in his post doctoral project  
22 because, essentially, when Dr. Pinto joined Dr.  
23 Howell, Dr. Howell was in the hospital with serious  
24 ailment, that we did not know, I got a phone call at  
25 midnight, whether he will make it or not make it

0042

1 that evening. And he was in the hospital when  
2 Dr. Pinto arrived in the laboratory. So I welcomed  
3 Dr. Pinto, and I think I initiated that particular  
4 project to help Dr. Howell to work on his system.

5 I thought for Dr. Pinto to look at the  
6 bystander effect, the system that we had developed  
7 to study another item in the radiation field, would  
8 be a suitable thing for Dr. Pinto to do a post  
9 doctoral project.

10 So, I know of what Dr. Pinto, in the  
11 two years or more, three years that he spent with  
12 Dr. Howell, the work that he had done, and I believe  
13 we have a manuscript in the works, or I am aware of  
14 that work, and -- but I did not see his notebook or  
15 any of that, but he presented the data to me, and  
16 mainly -- so my serving as a co-investigator into  
17 that grant comes from that area that -- so my  
18 intellectual contribution to the work that Dr.  
19 Howell was doing.

20 Q. So you're telling me that in  
21 determining to serve as a co-investigator, you  
22 relied on the data that Dr. Howell gave you for the  
23 purposes of making that decision?

24 MR. FLYNN: Objection to form, but go  
25 ahead.

0043

1 Q. Is that correct?

2 A. No, because I have an interest in that  
3 field, really. I'm -- I have been --

4 Q. Beyond your interest, insofar as review  
5 of any data for the purposes of determining whether  
6 you wanted to be associated with this renewal grant,  
7 the data you relied upon was the data that  
8 Dr. Howell gave you. Correct?

9 MR. FLYNN: Objection to form.

10 A. The doctor, he did not give me the  
11 data. He presented the data.

12 Q. What's the difference between giving  
13 and presenting?

14 A. No, giving me data, I receive a  
15 notebook, and look at that. I see a graph,  
16 presenting a graph. So I don't see the fine, fine  
17 details of what Dr. Pinto had done, but I have no

18 question about anything that Dr. Pinto -- I think  
19 Dr. Pinto had done a -- his -- a careful  
20 investigator has a deep insight and understanding of  
21 the field, and I have no reason to believe that  
22 Dr. Pinto -- I have --

23 Q. Forget about Dr. Pinto.

24 A. Yes.

25 Q. What about the concerns that had been

0044

1 raised about Dr. Bishayee's data? Did that enter  
2 into your determination as to whether to serve as a  
3 co-investigator on the renewal grant?

4 A. The concern of -- really, I did not  
5 think of that, because there is -- I know there is a  
6 concern about Dr. Bishayee, and probably you will  
7 ask me these questions later. I do not know that  
8 Dr. Bishayee, myself, did anything wrong, and I do  
9 not know --

10 Q. I understand that, but not withstanding  
11 that you say you don't know, you're now agreeing to  
12 associate yourself with the grant which Dr. Hill  
13 made a complaint about.

14 MR. FLYNN: Objection to form.

15 A. In this particular renewal -- I know  
16 sections of the old grant. I know sections of the  
17 old grant, as -- I know the spirit of the work of  
18 the old grant.

19 I know there is a concern from Dr. Hill  
20 against the work formed under the auspices of that  
21 first grant. As far as the second grant from 2001  
22 up to Dr. Howell submitted the second grant, a  
23 renewal of the first grant, I know, again, of the  
24 work done by Dr. Gerafhchenko, again through the  
25 journal club presentations -- not only the journal

0045

1 club presentations, again I help Dr. Gerafhchenko in  
2 the tissue cultures of the cells. I helped him  
3 conceptually and into the techniques and the  
4 importance of the system of using those gap junction  
5 competent and deficient cells. I helped him in  
6 that.

7 Q. Again, I'm just asking you --

8 A. I was very happy with the work that was  
9 presented in there, so -- associating myself with  
10 the renewal, I had a number of years of positive  
11 scientific progress that I didn't see any issue that  
12 would prevent me from participating into a renewal,  
13 but when I agreed to participate in the renewal, to  
14 be a co-investigator on his grant, I did not think  
15 of why you are here, and there are serious  
16 allegations or -- of what I have seen, myself,  
17 again, because I have seen a lot of Gerafhchenko and  
18 Pinto, the work done by those two.

19 Q. We're not concerned with them.

20 A. But that's very important for me why I  
21 am a co-investigator, and Neti, that I have seen a  
22 lot of positive progress, good work, that I

23 associated myself with this grant.  
24 Q. I understand. Thank you.  
25 (Experiment done on or about April of

0046

1 2001, was marked Exhibit Azzam 2 for  
2 identification)

3 Q. I'll show you what I've marked as Azzam  
4 Exhibit 2 for identification. Take a minute, and  
5 while you're doing so, do you recall on or about --  
6 in or about April of 2001, Dr. Roof if a say, the  
7 chairman of the Canvas Committee on Research  
8 Integrity, instructing Dr. Howell to repeat certain  
9 key experiments after Dr. Hill had reported  
10 misconduct on the part of Dr. Bishayee?

11 A. *I -- about repeating experiments? I do*  
12 *not know the name of the person that mentioned to*  
13 *repeat these experiments, but I know that Dr. Howell*  
14 *was asked to repeat experiments.*

15 Q. Okay.

16 A. Yes.

17 Q. And this document that I've shown you,  
18 Azzam 2 --

19 A. Yes.

20 Q. -- are you familiar with this?

21 A. I am familiar with my initial in here  
22 that I have initialed these. I sat on the chair in  
23 the Room 451A or B. I do not know the name of the  
24 room, exact number of the room.

25 Dr. Howell was doing experiments, and I

0047

1 sat there on the chair that he was actually doing  
2 the experiments. I did not participate in the  
3 performance of the experiments. I was sitting there  
4 when he was doing the experiment. That's as much as  
5 I did, and this happened at an extremely busy time  
6 for me, that was -- I was annoyed that I was wasting  
7 my time.

8 Q. I understand. But I'm curious as to  
9 how it came to be that you were asked to, as you  
10 say, sit on the chair and waste your time.

11 A. Dr. Howell, that he actually did the  
12 experiments.

13 Q. Who asked you to sit there?

14 A. Dr. Howell.

15 Q. Okay. Did you have a choice doing so  
16 or not, or did you do so as a professional courtesy?

17 A. As a professional courtesy.

18 Q. Okay. So, to your knowledge, you were  
19 not instructed by any other administrator of the  
20 department, whether it be Dr. Baker --

21 A. No.

22 Q. -- Dr. Raveche`, or anyone?

23 A. No.

24 Q. It was Dr. Howell's request?

25 A. Exactly.

0048

1 Q. To your recollection -- to your

2 recollection, Dr. Howell performed this experiment  
3 himself?  
4 A. Yes.  
5 Q. Was Dr. Bishayee present, to your  
6 recollection?  
7 A. My recollection, and as clear as it can  
8 be, no one but Dr. Howell performed the experiment.  
9 Q. Some of the writing, if you look at  
10 this, appears to be Dr. Bishayee's. If you look at  
11 the Bates stamp again, B007367.  
12 Do you see where I'm referring to?  
13 A. Yes.  
14 Q. Do you recognize that as Dr. Bishayee's  
15 writing?  
16 A. No.  
17 Q. Okay.  
18 A. I have no idea. I would recognize  
19 Roger's writing, but not Bishayee.  
20 Q. If you look to the page preceding 7367  
21 to 7366, do you recognize that handwriting as  
22 Dr. Howell's?  
23 A. Yeah.  
24 Q. Okay. Would you agree with me that, at  
25 least from a lay person's perspective, that the  
0049  
1 writing on 7367 is different than that on 7366?  
2 MR. FLYNN: Objection to form. Go  
3 ahead.  
4 A. Looks different.  
5 Q. So, does this refresh your recollection  
6 as to whether, in the course of this experiment  
7 being done -- also, if you look at 7371, this page,  
8 in fact, has your initials in the upper right-hand  
9 portion.  
10 A. Uh-huh.  
11 Q. Do you recall whose work you were  
12 initialing? Was this Dr. Bishayee's or was this  
13 Dr. Howell's?  
14 A. I really cannot recognize the  
15 handwriting. It doesn't look like Dr. Howell.  
16 Q. It looks like somebody else's, though?  
17 A. But now as we're going into this in  
18 here, Dr. Howell was working on the laminal flow  
19 hood. Did Dr. Bishayee make the record of these  
20 counts in here? It is quite possible.  
21 Q. I realize time has passed, and I'm only  
22 asking your best recollection --  
23 A. It is quite possible, and things flash  
24 in my mind, that it is quite possible that he  
25 recorded these numbers and, if anything, now that I  
0050  
1 look at these, and you ask me the question, and  
2 probably the Coulter counter was right beside the  
3 chair where I was sitting. I was sitting in -- to  
4 look at Dr. Howell that is doing the experiment. So  
5 that's the hood, this is the desk, and the Coulter  
6 counter was here.

7                   It is quite possible that Dr. Bishayee  
8 recorded that he put the sample on the Coulter  
9 counter, and he recorded these Coulter counter --  
10 these counts.

11                   So if it is, is it Dr. Lenarczyk or  
12 Dr. Bishayee that recorded the numbers, it might  
13 very well be Dr. Bishayee, and one of them  
14 Dr. Lenarczyk.

15           Q.       This experiment, if you go back to  
16 7362, this is an experiment associated with the  
17 bystander effect. Isn't that correct?

18           A.       I need to read it to know.

19                   It's associated with the bystander.  
20 Certainly, it should be.

21           Q.       Because you can see that the reference  
22 to tritiated thymidine, 50 percent is what we call a  
23 50 percent experiment, and 50 percent of the cells  
24 were irradiated, and 50 percent were not. Correct?

25           A.       In principle.

0051

1           Q.       At least that's what the protocol  
2 called for?

3           A.       Yes.

4           Q.       Isn't that correct?

5           A.       Yes.

6           Q.       So, if I understood you, while you sat  
7 and observed this experiment --

8           A.       Yes.

9           Q.       -- did you have any responsibilities  
10 whatsoever insofar as verification, or supervision  
11 as this experiment progressed?

12           A.       The experiment was getting done. I  
13 didn't -- did not go into details of the experiment.

14           Q.       You just sat and observed?

15           A.       That's correct.

16           Q.       Why were you initialing? I don't  
17 understand this.

18           A.       The work was getting done. The work  
19 was getting done.

20           Q.       How did you determine whether the work  
21 was getting done or not? What led you to -- let me  
22 finish, please.

23                   The fact that you initialed carries at  
24 least reasonable -- is it reasonable for me, or any  
25 person, to surmise or to believe, that by virtue of

0052

1 your placing your initials --

2           A.       Right.

3           Q.       -- quite frequently throughout the  
4 documents associated with this experiment --

5           A.       Right.

6           Q.       -- it was done for the purposes of  
7 establishing that somebody witnessed what was going  
8 on?

9           A.       Right. And I did witness that they  
10 were using Coulter counting. They were culturing  
11 the cells. If they were mixing the culture with



12 each other, I was there. I was there. And  
13 certainly, I did see, but did I take a -- obviously,  
14 to know if a culture is labeled with tritiated  
15 thymidine, a Coulter counter, a geiger counter,  
16 cannot tell you much about it, right? But, yes, I  
17 know that the experiment was being done, certainly.

18 Q. The protocol, if you look at number  
19 one, said that the cells that were being used were  
20 to be 80 to 90 percent confluent at the start of the  
21 experiment. Is that correct?

22 A. If that's what it says, I guess so.

23 Q. What does that mean to you?

24 A. Eighty to 90 percent confluent? That  
25 would mean that almost 90 percent of the surface

0053

1 area on which the cells are growing are filled with  
2 cells.

3 Q. Okay. And if there's -- not  
4 100 percent of the plate is filled, are you familiar  
5 with what's known as contact inhibition?

6 A. Yes, I am, certainly. That does not  
7 apply to the V79, by the way.

8 Q. But in order for there to be contact  
9 inhibition, it would have had to be --

10 A. These cells are never contact  
11 inhibited, sir.

12 Q. I'm sorry?

13 A. These cells will never get contact  
14 inhibited.

15 Q. So, if they were not ever contact  
16 inhibited, would that prevent these cells from going  
17 into what's known as S phase in the cell cycle?

18 A. If they are not contact inhibited, yes,  
19 certainly, they will go into S phase. Certain cells  
20 will go into S phase of the cell cycle.

21 Q. Certain cells?

22 A. Certain, not all. In the V79 cells,  
23 they can fill the flask by lapping on top of each  
24 other; one layer, second layer, third layer, and so  
25 you will always have cells in S phase.

0054

1 At least, I culture V79 cells, maybe  
2 millions of them, and billions of them for a period  
3 of -- from 1978 until 1986, so I know them -- at  
4 least, they come into different strains, so I'm very  
5 familiar with V79, yes.

6 Q. In fact, when we go back to your  
7 curriculum vitae, which I had a few moments ago,  
8 this suggested that, at least looking at your  
9 writings and your experience, you've had extensive  
10 experience with the bystander effect?

11 A. Yes.

12 Q. At least from what I can see, you've  
13 had numerous talks on it?

14 A. I could be, *maybe one of the world*  
15 *experts on the bystander effect.*

16 Q. You've had articles and grants?

17 A. Yes. Yes.  
18 Q. Insofar as this 80 to 90 percent  
19 confluence, would I be correct that that would mean  
20 when you talked about some cells going into S  
21 cycle --  
22 A. S phase.  
23 Q. -- that that would mean that anywhere  
24 from approximately 20 to 40 percent?  
25 A. It really all depends on -- I am

0055

1 answering you a scientific -- the scientific answer.  
2 It all depends on how the culture, when they were  
3 re-fed, the last time they were re-fed, how long  
4 before you came to use them.

5 Actively growing cells -- you would  
6 have actively growing cells. *So if they are*  
7 *80 percent confluent being V79 cells, I would say --*  
8 *and you did flow cytometry analysis, you may get*  
9 *30 -- 30 percent being in S phase, but you really*  
10 *have to do it. It all depends how.*

11 Q. I know you really have to do it, but  
12 I'm also focusing you on the particular experiment  
13 that you witnessed.

14 A. Yes.

15 Q. So when you're giving me these  
16 numbers --

17 A. If I put my initial again in here  
18 again, from the time of 2001, I did put my initial  
19 on something that I did see getting done. So I  
20 didn't initial in the blind. So, that they --  
21 whatever number they recorded, or something that  
22 counts, I was there. I did see the counts that they  
23 have recorded.

24 Q. Were you done? I didn't mean to  
25 interrupt you.

0056

1 The medium that was used to culture  
2 these cells is referred to as MEMB. Is that  
3 correct?

4 A. Yes.

5 Q. What's that stand for?

6 A. It's, again, A and B -- MEM is the  
7 typical -- is the name of the growth medium that's  
8 minimal essential -- minimal. Okay.

9 Now, I cannot define it exactly. The A  
10 and B, I think, is in nomenclature that Dr. Howell  
11 and Dr. Hill would use in there. So MEM is the  
12 typical name -- is the typical name of the product,  
13 of the growth medium.

14 A and B comes from Dr. Hill and  
15 Dr. Howell, and I do not remember what they mean by  
16 A and B exactly.

17 Q. Okay. In general, is it your  
18 recollection that one had calcium in it, and one did  
19 not?

20 A. No, I don't remember.

21 Q. You don't remember? Okay.

22           A.       What I really wanted to pay attention,  
23 the V7 -- so I didn't have an interest to know the  
24 details of what they were doing as -- because I had  
25 my own work to take care of.

0057

1           Q.       Did you, at any time, see something  
2 known as deoxycytidine, D-E-O-X-Y-C-Y-T-I-D-I-N-E,  
3 added to the medium?deoxycytidine?

4           A.       Deoxycytidine to this particular medium  
5 of this particular experiment?

6           Q.       Yes.

7           A.       What I know, if the added is tritiated  
8 thymidine was added.

9           Q.       I'm asking whether deoxycytidine was  
10 added to the medium?

11          A.       I do not recall.

12          Q.       Do you see anything in this protocol  
13 that would suggest that it had been?

14          A.       Deoxycytidine in here? I don't see  
15 even the deoxycytidine being mentioned here on page  
16 362.

17          Q.       Okay.

18          A.       I don't see any deoxycytidine mentioned  
19 here.

20          Q.       I want to turn your attention to 7365,  
21 and these were some Coulter counts, I believe?

22          A.       These are not Coulter counts, these are  
23 colony counts.

24          Q.       I apologize.

25                   This appears to suggest, insofar as the

0058

1 experiment that you witnessed, that there was little  
2 or no killing of the bystanders?

3                   MR. FLYNN: I'll put a standing  
4 objection to this line of questioning. I  
5 understand his initials are on it, you can ask  
6 about his observations as he can recall, but  
7 at certain points you're getting very close to  
8 seeking what I deem expert testimony from him  
9 in violation of the rules, especially on a  
10 page like this where his initials don't even  
11 exist.

12                   MR. PINCUS: I understand. Your  
13 objection is noted.

14          Q.       You can answer. Are you able to  
15 discern?

16          A.       No. I have to go and read, and  
17 probably take a few hours to make -- it takes me a  
18 long time to review any experiment.

19          Q.       That's fair.

20                   When you observed this experiment, and  
21 it was concluded, did Dr. Howell discuss the results  
22 with you in any fashion?

23          A.       He mentioned the results to me.

24          Q.       What did he say?

25          A.       I want to tell you exactly what I had.

0059

1 He was telling me, and they were talking and  
2 discussing -- he was discussing the data, and,  
3 honestly, and I was listening, but my mind, I was  
4 not dwelling. I know that they did not find  
5 imitation response, and they prepared the poster.  
6 He prepared the poster and everything, and as he was  
7 preparing the poster --

8 Q. What poster are you referring to?

9 A. A poster on mutation work that was  
10 submitted to one of the meetings. Probably, the  
11 meeting in the Reno, Nevada.

12 Q. I'm not talking about that right now.  
13 We will get to that.

14 A. That experiment --

15 Q. Let's be clear, because we have to go  
16 baby steps, is the best way I can describe it.  
17 Okay?

18 A. Sure.

19 Q. Right now I'm focusing on your being  
20 present while Dr. Howell and, possibly, Dr. Bishayee  
21 are conducting this experiment on or about April 12,  
22 and some days thereafter. Okay?

23 A. Yes.

24 Q. And there comes a point in time where  
25 the experiment concludes?

0060

1 A. Correct.

2 Q. And, I guess, as most scientists do,  
3 they look at the experiment and they say, you know,  
4 we have some results here.

5 A. Uh-huh.

6 Q. Well, what -- did Dr. Howell discuss  
7 the results with you?

8 A. Discuss the result? *Is that I --*  
9 *again, what I recall, that they did not observe a*  
10 *bystander effect, that -- yeah.*

11 Q. Did you, in the course of him  
12 indicating that they did not observe a bystander  
13 effect --

14 A. That's my recollection.

15 Q. I understand.

16 Do you remember, you know, looking at  
17 the colony counts, or the Coulter counts, or the  
18 FACS results?

19 A. No.

20 Q. You didn't look at that?

21 A. No, I did not myself.

22 Q. Do you know what Coulter counter was  
23 used for the purposes of this experiment?

24 A. Yeah, a Coulter counter that Dr. Howell  
25 had. Yes, I know.

0061

1 Q. Do you know how long that Coulter  
2 counter had been used in his lab?

3 A. That same Coulter counter, when I  
4 arrived, that Coulter counter was there.

5 Q. So that Coulter counter was there in

6 2000?  
7 A. Right.  
8 Q. Is it still there, to your knowledge?  
9 Have you seen it?  
10 A. I really do not know. I really do not  
11 know. I have not -- I know that Dr. Howell  
12 purchased a new Coulter counter.  
13 Q. When was that?  
14 A. That was a couple years ago. Two,  
15 three years ago.  
16 Q. Have you seen the counter that you  
17 recall seeing from the period of about 2000 through  
18 a couple of years ago? Is it still around? Have  
19 you seen it in the lab?  
20 A. I never really looked for it.  
21 Q. Okay.  
22 A. And -- yeah.  
23 Q. To your knowledge, do Coulter counters  
24 contain certain types of -- I'll call it, hazardous  
25 materials? Is that correct?

0062

1 A. They contain -- that particular Coulter  
2 counter contains mercury.  
3 Q. Would I be correct that mercury is a  
4 compound for which records have to be maintained  
5 when it gets disposed?  
6 A. When it gets disposed, certainly, it's  
7 a hazardous material, yeah.  
8 Q. So to the extent that that Coulter  
9 counter no longer exists in the laboratory, based  
10 on --  
11 A. I don't know if it doesn't exist. I  
12 have no idea.  
13 Q. Let's assume for the purposes of our  
14 discussion that it no longer exists within the  
15 laboratory. Based on your experience, your rank,  
16 you're being a man of science, there would be  
17 records that would have had to be prepared  
18 reflecting the disposal or somehow --  
19 A. Certainly. EOHSS also have to be the  
20 record. The environmental health -- the safety  
21 committee at the University, because you would give  
22 them the mercury, and they will dispose of it. It's  
23 a regulated substance.  
24 Q. Explain to me the process, as best you  
25 can recall, sir.

0063

1 A. Normally, if you want to dispose of  
2 hazardous material, you package them, you indicate  
3 the amount, you date them, and then you call EOHSS.  
4 That's the University Environmental Occupational  
5 Health and Safety --  
6 Q. Good for you.  
7 A. -- department. You will call them and  
8 they will come and collect it, and then they dispose  
9 of it.

10 MR. PINCUS: Scott --

11 MR. FLYNN: I made the request.  
12 MR. PINCUS: -- I know I have made this  
13 request, and I know you told me you were going  
14 to look into it, but based on the  
15 representation that was made to you,  
16 apparently, that this counter was disposed of,  
17 we obviously want to know, you know, the  
18 records of when it was done.

19 I'm not going to go into the reasons  
20 why here now, but I want to renew that request  
21 here now. Okay?

22 Q. Okay. Do you remember whether, in any  
23 of your experiments, you used the particular Coulter  
24 counter that was used in this experiment?

25 A. In my experiments, we mainly used the  
0064 hemocytometer until today.

1 Q. So the answer is no?

2 A. The answer, we used the Coulter  
3 counter, but we did use but -- what Sonia does in  
4 the lab, the students and until today, we strictly  
5 use the hemocytometer.

6 Q. Okay. So do you maintain a record of  
7 those Coulter counters?

8 A. Coulter counters, as I mentioned to  
9 you, that in all our survival experiments, at least,  
10 I would say, 99 percent of them, it was a  
11 hemocytometer, and if anybody used the Coulter  
12 counter for my own work, it would be me, actually,  
13 for an experiment that I did. And -- that I did,  
14 and I would have the records of it, certainly.

15 Q. You would have them?

16 A. Yes.

17 Q. Okay. But you're talking about the  
18 hemocytometer is different from the Coulter counter  
19 that was used?

20 A. The hemocytometer is a glass -- is a  
21 device that has little squares. We dilute the  
22 cells. We have a known volume that goes and it's  
23 visual under the microscope. We count. We don't  
24 use electronic counter. So it's a human counting,  
25 use electronic counter. So it's a human counting,

0065  
1 not electronic counting, the hemocytometer, that's  
2 what we use, and we use it until today even at Brook  
3 Haven, where I do a lot of experiments. They have  
4 very well-calibrated electronic counters, but we  
5 used -- all my students and post docs, we use the  
6 hemocytometer.

7 Q. Very good.

8 A. In my work in Canada and Boston, I use  
9 only the Coulter counter. Couple of times, maybe  
10 the hemocytometer.

11 MR. PINCUS: Mark this Azzam 3.

12 (Experiment done on or about April 19,  
13 2001, was marked Exhibit Azzam 3 for  
14 identification)

15 Q. I'm going to show you what I've marked

16 as Azzam Exhibit 3. This is an experiment, again,  
17 another 50 percent experiment involving tritiated  
18 thymidine that was done on or about April 19, 2001.

19 Have you seen this document before?

20 A. I remember that -- I'm not sure.

21 Q. Okay. The reason why I ask is, the  
22 investigator for this particular experiment is not  
23 identified, and does that assist you to recollect  
24 whether or not you had any participation or --

25 A. As I mentioned to you, I did not

0066

1 participate other than observe. There's a big  
2 difference between both.

3 Q. I appreciate that, and I will go on to  
4 ask you, does this refresh your recollection in any  
5 fashion as to whether you observed this particular  
6 experiment?

7 A. I do not remember. Unless I see my  
8 initial, I don't remember.

9 Q. Okay. I mean, whether or not there are  
10 initials or not, do you recall, in or about this  
11 time, whether Dr. Howell requested you to observe  
12 more than one experiment?

13 A. I was there for several days that I  
14 sat. I wasn't there only for a single day, multiple  
15 days that I observed. I sat there for the full  
16 length of the day that he was performing the  
17 experiments so, the number of experiments, I don't  
18 recall. I may have, at the end, I said, I cannot do  
19 that anymore. I got many things on the go. I may  
20 have said that.

21 Q. I can understand.

22 A. I do not want -- because I felt my time  
23 was entirely wasted, and it's against me -- my own  
24 attitude. What am I? I felt very awkward to be  
25 sitting on that chair. I respect Dr. Howell, I

0067

1 respect all my colleagues in the -- so, it was a  
2 very awkward situation for me, plus my time was  
3 precious.

4 Q. Why was it awkward? I'm curious.

5 A. Awkward to tell me to sit -- *if I sit*  
6 *there, it means I know there is something wrong.* I  
7 hold the highest respect for my colleagues, you  
8 know.

9 Q. When you say you know something was  
10 wrong, what did you know that was wrong?

11 MR. FLYNN: Objection to form.

12 Q. You can answer.

13 A. The wrong -- I knew by that time there  
14 is allegations from Dr. Hill against work done in  
15 Dr. Howell's laboratory. I knew that.

16 Q. So, obviously, as time passes, it's  
17 reasonable for you to feel, I've got better things  
18 to do, and that, you know --

19 A. At that particular time -- I'm sorry to  
20 interrupt you.

21 Q. There comes a point in time where you  
22 say, I don't want to do this anymore. So, you seem  
23 to recall that you sat for at least a number of  
24 days?

25 A. Yes, I did.

0068

1 Q. So, if the first experiment that I  
2 showed you a moment ago commenced on April 12, and I  
3 believe that there is data associated with this  
4 experiment that runs through -- your initials  
5 appear --

6 A. It could be at least seven days. It  
7 takes seven days for these colonies to form.

8 Q. And this experiment -- in fact, the  
9 last data appears to be dated on the 19th?

10 A. Yes. That makes sense.

11 Q. So then I'm looking at this particular  
12 experiment that we just marked as Azzam 3 and, you  
13 know, if you recall sitting there, you know, for at  
14 least seven days or so, is it reasonable that you  
15 may have been here during -- while this experiment  
16 went, but you might not have initialed the document?

17 A. I do not really recall, Mr. Pincus.  
18 Obviously, I was in and out of the lab. Certainly I  
19 may have gone in and out of the lab numerous times  
20 during the day, but whether I sat on this is beyond  
21 my recollection. I cannot remember these sheets or  
22 any of that. I don't.

23 Q. Okay.

24 A. Even the ones that you showed me  
25 earlier, I know my initials there, yes, it is.

0069

1 Q. I appreciate that, and I can represent  
2 to you that your initials do not appear on any of  
3 these pages, but I'm trying to explore, solely by  
4 way of a time line -- you know, this appears to have  
5 been conducted, at least part of it, during a period  
6 of time when you were observing what Dr. Howell was  
7 doing.

8 A. This experiment -- can you tell me, it  
9 seems the goal of this experiment is what?

10 Q. Essentially, my understanding is that  
11 this experiment is essentially the same as what we  
12 reviewed as Azzam 2.

13 A. Which it was only strictly the  
14 bystander effect from colony survival.

15 Q. But there's no FACS separation of the  
16 bystander cells from the HIT cells.

17 Now --

18 A. Right.

19 Q. Now, if you look at the excel graph  
20 that's on 7394. See where I'm referring?

21 A. I see it.

22 Q. That shows there was -- does it show  
23 that there was any bystander effect or not?

24 MR. FLYNN: Objection.

25 A. I cannot tell. I'm sorry.



0070

1 Q. Why can't you tell? I thought this is  
2 your expertise.

3 MR. FLYNN: Objection to form.

4 A. It's not my expertise in tritiated  
5 thymidine, and not even the best expert in the world  
6 will give you a judgment immediately. We need -- I  
7 need to read it, understand it again, before I tell  
8 you yes or no.

9 Q. Fair enough. If the cell for this  
10 experiment had been subcultured approximately two  
11 days before this commenced on the 19th, would they  
12 be synchronis, to your knowledge?

13 MR. FLYNN: Go ahead.

14 A. The question that you have asked needs  
15 a lot more details for me to give an answer.

16 You subculture cells at a certain  
17 density, cell density. You haven't told me, and I  
18 do not know at what cell density, how they  
19 subculture the cells, how they plated them.

20 If you take a confluent culture, and  
21 you split it in two, put that culture in two, V79  
22 has a doubling time of about 11 to 12 hours.

23 Q. In fact, you've written to that effect,  
24 haven't you?

25 A. Yes, I did. I measured very carefully

0071

1 the doubling time of these cells. We measure the  
2 lengths of the cell cycle, the difference. Yes, we  
3 did publish on that.

4 Q. I'll take that.

5 By the way, do you have any  
6 recollection with regards to Exhibit Azzam 3, having  
7 any discussions with Dr. Howell about this  
8 experiment?

9 A. Any recollection? You mean, discussion  
10 of what nature?

11 Q. The results.

12 A. No, I do not recall, and if any results  
13 were discussed with me, most probably, as far as  
14 these certain, it comes from here to there. My  
15 discussion --

16 Q. What does "here to there" mean?

17 A. My discussion always center in science.  
18 There is -- the idea of black and white is a very,  
19 from a scientific conclusion, you know, when Galileo  
20 said they sent him to the inquisition, when  
21 Capernicus made an observation, he got many things  
22 that were thought wrong were proven correct.

23 That, in science, all along, if you  
24 discuss with me, unless I am given the opportunity,  
25 or I am willing to go and dig in the data to see

0072

1 that there is something improper, you tell me  
2 whether a bystander effect exist or not, my attitude  
3 to it, you've got -- if you don't observe it, it  
4 doesn't mean that it does not exist.

5                   These experiments have time course. I  
6 maintain that the bystander effect is  
7 dose-dependent, and linear energy transfer  
8 dependent. I did not publish on it yet, but I am  
9 the first person to say it into discussions. Many  
10 people objected. They said the bystander effect is  
11 dose independent, linear energy transfer  
12 independent.

13                   I have data that has been repeated  
14 three times that shows I was correct, but the time  
15 that I looked at the effect, and the end point that  
16 I chose to look at the effect show that I am  
17 perfectly correct.

18                   And I showed it in Argentina, I showed  
19 it in multiple places that the people that objected  
20 to my initial statement that it is dose dependent,  
21 now are very much convinced that I should hurry and  
22 publish that work.

23                   Q.       But your confidence, as I understand  
24 you, is derived from the fact of your ability to  
25 show the doubters --

0073

1                   A.       Correct.

2                   Q.       -- that you can repeat the data?

3                   A.       Yeah. I repeated not using  
4 Dr. Howell's system, but I have very firm data, that  
5 if you mix radiated thymidine labeled cells, human  
6 cells with unlabeled cells, there is a transfer of  
7 the stress response from those tritiated thymidine  
8 labeled cells to the unlabeled cells.

9                   Q.       My point was that your competence, in  
10 terms of being able to repeat that data, is very  
11 significant to you. Isn't that so?

12                   A.       That I did repeat --

13                   Q.       That you repeated?

14                   A.       That I find a bystander effect, yes, it  
15 is very significant. It's my own grant application.

16                   Q.       *It's significant in anything in science*  
17 *in being able to repeat data?*

18                   MR. FLYNN: Objection.

19                   A.       Repeat data? I didn't seek to repeat  
20 Dr. Howell's experiment.

21                   Q.       No. No. That wasn't my question.

22                   A.       The concept --

23                   Q.       I'm talking, in general, *confidence in*  
24 *terms of scientist's results, is derived from the*  
25 *ability to repeat?*

0074

1                   A.       Of course, it gives satisfaction,  
2 certainly.

3                   MR. PINCUS: Mark this.

4                   (Article in Journal of Thermal Biology,  
5 was marked Exhibit Azzam 4 for identification)

6                   Q.       Dr. Azzam, I'm showing you what's  
7 marked as Azzam Exhibit 4 and this appears to be an  
8 article that you co-authored?

9                   A.       Correct.

10 Q. In the journal -- in a certain journal?

11 A. Journal of Thermal Biology.

12 Q. Along with two other scientists?

13 A. Yes.

14 Q. And you recognize this, don't you?

15 A. Yes.

16 Q. And this had to do with the V79 cells

17 that you were speaking about a moment ago?

18 A. Yes.

19 Q. And this was at least a publication in

20 which you indicated that the cell cycle time for

21 these V79 cultures is approximately 11 to 12 hours?

22 MR. FLYNN: Objection.

23 This witness is a fact witness. You're

24 showing him a 1985 article. That kind of

25 seems like an expert opinion you're asking him

0075

1 for.

2 MR. PINCUS: I'm simply asking

3 confirmation of something he related by way of

4 response to the answer.

5 MR. FLYNN: You've called him here as a

6 fact witness for the facts of this case.

7 MR. PINCUS: That's right. He showed

8 me --

9 MR. FLYNN: You're asking him expert

10 testimony.

11 MR. PINCUS: I'm asking whether, in

12 fact, this confirms what he just said to me,

13 whether he wrote on the subject. That's all.

14 I'm done with it. That's all. I'll

15 take it back.

16 (Experiment conducted by Dr. Howell on

17 or about May 3, 2001, was marked Exhibit Azzam

18 5 for identification)

19 Q. Dr. Azzam, I'm going to show you what

20 we've marked as Azzam Exhibit 5. Again, this is an

21 exhibit. It appears to be conducted by Dr. Howell

22 on or about May 3, 2001, again involving the

23 bystander effect.

24 Have you seen this document before?

25 A. I don't remember, and -- I don't

0076

1 remember, no.

2 Q. Do you remember having any

3 responsibilities insofar as observation of any phase

4 or phases of this experiment?

5 A. I really do not recall. I know that I

6 observed -- did I observe on separate -- on

7 occasions that were separated by a period of time?

8 I do not recall.

9 I know that I observed for a number of

10 days, one after the other, but whether subsequently

11 I did, I cannot recall.

12 Q. So, beyond that first sequence of days,

13 you're saying there may or may not have been

14 occasion or occasions when you could -- you may have  
15 continued to observe Dr. Howell. Sitting here  
16 today, you don't have a recollection?

17 A. No.

18 Q. Fair enough.

19 I can represent to you that your  
20 initials do not appear anywhere on this document,  
21 and that was the basis of my asking you.

22 Did Dr. Howell, at any time, discuss  
23 with you the results of this experiment?

24 A. I do not remember. I don't recall.

25 Q. Did he discuss --

0077

1 A. This specific experiment, nothing --  
2 never in any specifics did I --

3 Q. Did he say, in general, I'm doing these  
4 experiments, and I'm not finding any bystander  
5 effect?

6 A. I do not remember of this experiment.  
7 I know when they came to repeat, I -- *I know that*  
8 *they couldn't repeat the initial, or some of the*  
9 *initial observations. I know that, yeah.*

10 Q. And in or about --

11 A. And that I knew from Dr. Howell, from  
12 Dr. Hill, from -- from both of them telling me that.

13 Q. In or about this time period, April,  
14 May, June, July, do you have any recollection of  
15 Dr. Howell saying, you know, I've done these  
16 experiments, and I was able to repeat the bystander  
17 effect? Did he tell you he had done it?

18 A. To repeat? What he mentioned, that  
19 there was something interesting as far as -- in the  
20 imitation experiment that they have done. Something  
21 interesting there that they found shows probably  
22 bystander effect, but as far as cell killing --

23 Q. That's what I'm referring to.

24 A. I know the general impression that I  
25 get, that *they couldn't repeat these experiments.*

0078

1 Q. *And while you may or may not have*  
2 *observed, you knew that he was conducting this*  
3 *series of experiments, trying to repeat?*

4 A. *Yeah. And I may have discussed what*  
5 *could be the reason for lack of repeatability of*  
6 *these experiments. There were multiple reasons that*  
7 *can be.*

8 And just to answer your questions,  
9 yeah, it is 12 hours, but as a scientist, I can tell  
10 you, 12 hours can go plus and minus. Maybe 12 hour  
11 or 50 hour, depending how you maintain the cells and  
12 whatever you have, dead cells in there to start up  
13 with, or your incubator, a suboptimal.

14 Q. Okay.

15 (At this point there is a break in the  
16 proceedings.)

17 Q. Dr. Azzam, are you ready?

18 A. Yes.

19 Q. Dr. Azzam, before we continue, am I  
20 correct that not only with respect to this National  
21 Institute of Health grant, which you are presently  
22 co-investigator along with Dr. Howell, that you, you  
23 also have other grants with Dr. Howell in which  
24 either you are principal investigator and he's  
25 co-investigator, and vice versa?

0079

1 A. That is correct.

2 Q. There's one involving NASA, isn't  
3 there?

4 A. Correct.

5 Q. Are there any others?

6 A. Department Of energy, low dose  
7 radiation research. I am the principal investigator  
8 on these grants and Dr. Howell is a co-investigator.

9 Q. So --

10 A. Is a co-invest. An investigator.

11 Q. There's two others then?

12 A. Yes. Those two and University Hospital  
13 Cancer Center, I am a PI on a grant in which he is  
14 an investigator, Dr. Howell, and I am a  
15 co-investigator, on a grant with Dr. Howell and  
16 Dr. Ferraris, F-E-R-R-A-R-I-S.

17 Q. So there's four others?

18 A. Correct.

19 Q. So the NASA grant was for approximately  
20 one of a quarter million dollars as I recall?

21 A. \$1.2 million. Yeah.

22 Q. And the energy grant is worth?

23 A. 730,000. Yeah.

24 Q. And the one with the hospital is?

25 A. 80,000.

0080

1 Q. And the last one that you just  
2 identified?

3 A. I am an investigator on this grant. I  
4 believe it is about 600,000.

5 Q. Okay.

6 (Experiment by Dr. Howell conducted on  
7 or about June 28, 2001, was marked Exhibit  
8 Azzam 6 for identification)

9 Q. Dr. Azzam, I show you what I've marked  
10 as Azzam Exhibit 6.

11 This is another 50 percent experiment  
12 that, apparently, Dr. Howell may have performed on  
13 or about June 28, 2001.

14 Do you know whether you engaged in any  
15 observations with respect to this experiment?

16 A. I do not recall. Probably not. More  
17 than likely not.

18 Q. What leads you to make that statement?

19 A. Because we're going into June. The  
20 date here I see, June 28, I don't think, because as  
21 I mentioned to you, the one early in April, I know  
22 the first one, I was there.

23 Q. Okay.

24 A. Whatever my -- whenever my initials  
25 existed.

0081

1 Q. Do you have any recollection of  
2 Dr. Howell discussing any elements of this  
3 particular experiment?

4 A. No.

5 Q. Okay. Again, I repeat to you, I know  
6 the general things but nothing of the details in  
7 here.

8 A. Numbers.

9 Q. The general thing being again?

10 A. The general idea that in repeat  
11 experiment -- I take it back. Not maybe about all  
12 the experiments. *I know some experiments were done*  
13 *that they did not repeat the initial observation.*

14 Q. When you say -- what are you taking  
15 back, when you say, I'm taking it back?

16 A. No. No. That it goes into a detailed  
17 thing.

18 Q. Okay. Okay. Fair enough.

19 Let's just round these out.

20 (Experiment, was marked Exhibit Azzam 7  
21 for identification)

22 Q. I'm going to show you what we marked as  
23 Exhibit Azzam 7.

24 Are you familiar with this document?

25 A. It look the same as the others.

0082

1 MR. FLYNN: That's what I was thinking.

2 Q. Do you recall --

3 A. No.

4 Q. -- engaging in any observations  
5 associated with this experiment?

6 A. No.

7 Q. This was what we call 100 percent

8 experiment?

9 A. Yeah.

10 Q. Do you recall engaging in any  
11 observations of those?

12 A. No. No.

13 Q. Did Dr. Howell, to your recollection,  
14 discuss this experiment with you or the results of  
15 this experiment with you?

16 A. Discussion of very specific experiments  
17 I don't remember. I never discussed a specific  
18 experiment or the specifics of any experiment and  
19 one more time I repeat, I know they were repetition.  
20 They tried repeat experiments but whether they all  
21 worked, they did not work, I don't know.

22 I have my own research problem. I  
23 wasn't spending my time observing anybody else's  
24 work.

25 Q. And your understanding was, they were

0083

1 trying to repeat results which had been reported in

2 publications that were used to support application  
3 for the grant. Correct?  
4 A. Repeat experiments in support? No. I  
5 am not into any -- any --  
6 Q. Your understanding was that, why they  
7 were trying to repeat the experiments?  
8 A. To repeat experiments, I know the  
9 repeats because of the allegations that Dr. Hill and  
10 Dr. Howell had with each other.  
11 Q. Okay.  
12 (Experiment, was marked Exhibit Azzam 8  
13 for identification)  
14 Q. Dr. Azzam, I show you what's been  
15 marked as Exhibit 8.  
16 Are you familiar with this experiment?  
17 A. No.  
18 Q. Do you have any recollection of  
19 observing any of the experimentation as you had back  
20 in April of -- come September of 2001?  
21 A. No. I think there is no point, even if

22 you have more of these -- as I mentioned to you, I  
23 only observed for the sake -- only that first one,  
24 when I was asked to sit. I did not then go sit,  
25 neither was Howell, Bishayee, Lenarczyk or

0084

1 subsequently anybody other than my own people, other  
2 than my own lab members to participate in  
3 experiments.

4 Q. So then, this is the last one I'm going  
5 to show you but just to round it out.

6 Do you have any recollection of  
7 Dr. Howell discussing the results of this experiment  
8 that appear on page 7485?

9 A. Specific experiments, I -- specifics of  
10 experiments, I never engaged in any of these  
11 discussions with Dr. Howell. Then, as I said, they  
12 discussed, when they were preparing a poster to go  
13 to Reno, Nevada meeting, they discussed with me what  
14 goes on -- on the poster and that -- and many of the  
15 things would come through here and exit from there.

16 Q. Let's talk --

17 A. To me anyway.

18 Q. Let's talk about that now. Okay?

19 So, put a time frame on that for me, if  
20 you would, please. When did this discussion about  
21 Reno take place?

22 A. I really do not remember when the  
23 meeting is. But if you have my CV, we can check the  
24 exact time.

25 Q. That would assist you?

0085

1 A. It's one week before, which would be a  
2 couple days before the meeting. That's a poster to  
3 Malik Lenarczyk. I believe somebody was an author.

4 Q. I'm showing you Azzam 1 again and my  
5 question, just put a time frame on this discussion

6 about Reno.

7 A. You can get exact timing here.

8 Yes. Reno, Nevada, so that took -- the  
9 date is not there on this particular one. On many  
10 of them, I have the date. Not even the year is  
11 mentioned here.

12 Q. It was worth a try?

13 A. Yeah. Dr. Hill may remember when that  
14 meeting took place. I may tell you when. I may  
15 tell you when.

16 I would know from the grant that  
17 Dr. Spitz and I are on and Dr. Hill is on. We are  
18 three co-investigators on there. That was funded in  
19 June. Yeah. I don't remember.

20 Q. Fair enough. I appreciate you checking  
21 but we know that there was an event. That's the  
22 important thing.

23 And, so, there was this poster, you  
24 say, that had to be prepared?

25 A. Yeah. A poster had to be prepared, so

0086

1 perhaps had to be there. Whether to include this  
2 data or that data, and what to put on the poster.  
3 I, you know, I participated. I know doctor -- after  
4 they prepare --

5 Q. Hold on a second. Let's not get ahead  
6 of ourselves.

7 There was an event. And there was a  
8 poster and some graphs that had to be prepared. And  
9 who -- what person or persons were engaged in this  
10 discussion? Yourself, Dr. Howell, and who else? If  
11 anyone.

12 A. I don't remember if Marek was there or  
13 not. I know Marek stayed with me in the same room  
14 when we went to Reno, Nevada.

15 Dr. Hill was at the meeting.  
16 Obviously, Dr. Hill was not there in that  
17 discussion. I do not -- other than myself,  
18 Dr. Howell was.

19 Marek there or not, I have no  
20 recollection.

21 Q. You have a recollection of at least  
22 yourself and Dr. Howell?

23 A. Yes.

24 Q. And you're not sure whether  
25 Dr. Lenarczyk was present?

0087

1 A. And I don't remember even the specifics  
2 of that particular poster now anymore. I know it  
3 dealt with mutation, bystander mutation, but the  
4 exact specifics is beyond my recollection.

5 Q. But do you also recall in the course of  
6 discussion with Dr. Howell, there was some  
7 discussion about not including certain things?

8 A. No, because, if I recall that -- they  
9 had a negative result, and I said, it's negative  
10 result, negative result. I think that's what it is,



11 so I --

12 Q. What's -- I don't know what you mean by  
13 negative result.

14 A. Whether they were bystander mutation,  
15 or the bystander effect led them to mutation  
16 induction in the bystander cells, and I do not  
17 remember the specifics in there.

18 And I do not quite remember whether  
19 they saw an effect or not. That poster actually was  
20 beside my office, put up for maybe couple of years.  
21 But I never really -- it's not my own work -- to go  
22 and engage in to looking at it, or I had an  
23 interest. I am interested in the bystander effect,  
24 but I had enough of my own.

25 Q. So what, if anything else, do you

0088

1 recall Dr. Howell saying to you at that time?

2 A. That's about it.

3 Q. What did you say to him, if anything?

4 A. What did I say? I guess -- I do not  
5 remember, but my attitude, always, if that's what  
6 you, you know, you report, you want the poster, you  
7 report your finding. I do not remember.

8 Q. But you do recall that there was --

9 A. I was there when it was being prepared.

10 Q. Hear me out, in fairness to you.

11 You recall through a discussion  
12 involving this poster on whether to include certain  
13 things or not?

14 A. There was discussion whether should  
15 have a poster at all.

16 Q. Okay.

17 A. Whether they should have a poster at  
18 all, considering, I think, the allegation of  
19 Dr. Hill, and whether they should have a poster at  
20 all. And what I recall, and who would be, maybe, on  
21 the poster, if the poster -- yeah.

22 So, what I recall, that Roger Marek and  
23 Dr. Hill are co-authors on that poster. Dr. Hill's  
24 name appeared on that poster.

25 Q. So, this discussion took place in the

0089

1 context of Dr. Hill's complaint against --

2 A. No, I do not remember.

3 Q. Well, you brought it up, so explain to  
4 me again --

5 A. I'm aware, but I don't remember the  
6 specifics, Mr. Pincus. As I mentioned, whether to  
7 present the poster, not to present the poster. So I  
8 don't remember what is on the poster.

9 If we look at the poster, maybe I will  
10 remember, if there is a copy of that poster on  
11 any -- I may remember then some of the things. My  
12 memory would come back.

13 Q. Okay.

14 (Complaint, was marked Exhibit Azzam 9

15 for identification)  
16 Q. I'll show you what we marked as Exhibit  
17 Azzam 9. And have you ever seen this document  
18 before?  
19 A. I know that Mr. Scott has given me some  
20 papers relating to this particular case, which I  
21 must say I spend about 20 minutes going through it,  
22 so I do not remember if these pages are included  
23 there or --  
24 Q. What did he give you to review?  
25 A. The pages related to the case of

0090

1 Dr. Hill against UMDNJ.  
2 Q. Do you have those documents with you?  
3 A. No, I don't have them with me.  
4 Q. Can you identify what they were?  
5 A. As I mentioned to you, I spend about  
6 15, 20 minutes going through it. I was interested  
7 to see where my name appears, so those I read. The  
8 rest, I skimmed.  
9 Q. What did the documents consist of, as  
10 best you can recall?  
11 A. The first page is that Dr. Hill -- the  
12 allegations Helene Hill versus UMDNJ.  
13 Q. The complaint?  
14 A. The complaint, yeah.  
15 Q. Anything else?  
16 A. As I mentioned to you, the pages that I  
17 looked, I skimmed through to see whether the name  
18 Azzam would show, and I tried to read where my name  
19 would show.  
20 So there were pages -- I was extremely  
21 busy when this document was sent to me by Mr. Scott,  
22 probably, ten days ago. Ten days ago. So I had no  
23 time, including yesterday, to look at that, because  
24 I had many, many assignments to take care of, and  
25 still continue, so I did not read what's in there.

0091

1 I cannot identify if this was in there or not.  
2 Q. Do you still have the documents that  
3 were sent to you?  
4 A. Yes, I do.  
5 MR. PINCUS: Can I request that I be  
6 provided any documents that you provided him  
7 in anticipation of appearing at this  
8 deposition?  
9 MR. FLYNN: What grounds? We told you  
10 we represent him. He's in the control of  
11 UMDNJ. He's named throughout these as part of  
12 the --  
13 MR. PINCUS: When did you identify him  
14 as part of a control group?  
15 MR. FLYNN: We didn't have to. We told  
16 you we represented him a while back when you  
17 were contacting him.  
18 MR. PINCUS: I understand, but he's a  
19 fact witness, and you provided him certain

20 documentation. So, you're not going to  
21 provide that?

22 MR. FLYNN: If you provide me a request  
23 on what ground you'd be entitled to it.

24 MR. PINCUS: Okay.

25 MR. FLYNN: We can talk about it, but

0092

1 right now, I don't think we have to talk about  
2 that.

3 MR. PINCUS: Okay.

4 THE WITNESS: If I may interject?

5 MR. PINCUS: Sure.

6 THE WITNESS: If I may interject. The  
7 day that I appeared at your office, following  
8 the first subpoena, because I received this  
9 letter, so I came to your office. I think you  
10 were sick. And, subsequently, when I saw  
11 Dr. Hill in her office, she said, well, didn't  
12 your lawyer say that to you, because  
13 Mr. Scott -- Mr. Flynn mentioned that he  
14 represents me, or that --

15 MR. PINCUS: Okay.

16 THE WITNESS: -- I am -- whatever my  
17 role here, I'm not sure, but I just want to  
18 relay the statement by Dr. Hill, but didn't  
19 your lawyer mention to you not to come, that  
20 you were sick.

21 Q. So we're clear, we had given  
22 notification that that deposition had been  
23 adjourned, and it was our assumption that you would  
24 be notified, because we would have been instructed  
25 not to contact you directly. So, you know --

0093

1 A. I see.

2 Q. -- so your coming to my office was a  
3 surprise to my staff, and it was certainly -- by no  
4 means did we seek to inconvenience you or in any way  
5 be disrespectful of you. I want you to know that.  
6 Okay?

7 A. Thank you.

8 Q. Let's get back to this document.

9 I want to turn your attention to the  
10 entries -- the entry for March 29.

11 A. Yes.

12 Q. And if you go to the Bates stamp 236,  
13 there is a reference here to, that around four p.m.  
14 Anupam seemed to be in a great rush and asked Marek  
15 to give him some V79, which he did. This was  
16 observed by Ed.

17 A. No.

18 Q. Do you have a recollection of that  
19 occurring?

20 MR. FLYNN: I'm sorry. Where are you  
21 reading?

22 MR. PINCUS: Top of 236.

23 MR. FLYNN: I see it.

24 A. I do not recollect at all.

25 Q. When you say you don't recollect,

0094

1 you're telling me you just don't have any memory of  
2 that?

3 A. I would say not only that I don't have  
4 a memory, I want -- I don't recollect. I really  
5 do -- nobody in the lab. We are all busy. We're  
6 certainly busy. Ask Marek to give him some V79,  
7 which he did. This was observed by Ed. I have no  
8 recollection whatsoever that Marek gave cells to  
9 Anupam Bishayee.

10 For me to see that cells were given to  
11 Anupam Bishayee, that would mean -- that would mean  
12 that I had to be present there, which is very  
13 unlikely, because if I recall, Marek Lenarczyk  
14 worked in the same room as Lanie Hill, which was not  
15 in the same place where I would work.

16 And Anupam worked, as I mentioned,  
17 also, in another physical location as where I was,  
18 so if I would witness that, it seems to me that I  
19 had nothing to do. I would be in their rooms, when  
20 I was busier than them, busier than Dr. Hill, and  
21 busier than Dr. Howell.

22 Q. Okay.

23 A. So I wouldn't be sitting and observing  
24 any one of them.

25 Q. You'd agree that's somewhat of a --

0095

1 that's surmise on your part, because what you're  
2 saying to me is you have no firm recollection --

3 A. Yes.

4 Q. -- of this occurring?

5 A. Exactly.

6 Q. That's all I wanted to know.

7 Do you recall that you observed the  
8 conversation going on between them?

9 A. Which conversation?

10 Q. On this date?

11 A. No. No.

12 Q. I'll take that.

13 A. This -- is this, again, before the  
14 allegation? The allegation you mentioned was raised  
15 in April, right? That it became official. Because  
16 I got to know about this event after the formal  
17 complaint by Dr. Hill, I believe. Yes. That's when  
18 I got to know.

19 So there is no way on heaven and earth  
20 that I am going -- I have no idea there were things  
21 going on between Dr. Lenarczyk, Dr. Bishayee,  
22 Dr. Hill, Dr. Howell. I had absolutely, absolutely  
23 no idea.

24 Q. Whether or not there was a complaint or  
25 not at or about this time, has nothing to do with

0096

1 whether you observed these two individuals engaged  
2 in a conversation?

3 A. Yeah.

4 Q. And you're telling me that on March 29,  
5 you have no such recollection?  
6 A. That is correct.  
7 Q. That's all I need to know.  
8 (Document, was marked Exhibit Azzam 10  
9 for identification)  
10 Q. I show you what's been marked as  
11 Exhibit Azzam 10.  
12 Have you ever seen this document?  
13 A. No.  
14 Q. Did there come a time when you became  
15 aware that Dr. Bishayee had resigned from  
16 Dr. Howell's lab?  
17 A. After he resigned.  
18 Q. How did you learn of it?  
19 A. I -- how did I learn of it? That  
20 Anupam is leaving the lab. That is, I may have  
21 learned of it from Roger or from Anupam. I have no  
22 recollection. By either one I may have learned  
23 about it.  
24 Q. Did Dr. Howell or Dr. Bishayee ever  
25 tell you that this letter was given to

0097

1 Dr. Bishayee --  
2 A. No.  
3 Q. You didn't let me ask the question.  
4 Did Dr. Bishayee ever tell that you  
5 this letter had been given to him by Dr. Howell with  
6 instructions to sign it?  
7 A. No.  
8 Q. Did Dr. Howell ever indicate to you  
9 that he had given this letter to Dr. Bishayee with  
10 instructions to sign it?  
11 A. No.  
12 Q. Did you have any other discussions with  
13 either Dr. Howell or Dr. Bishayee regarding his  
14 resignation that you've not already identified?  
15 A. Any discussions with --  
16 Q. Or any conversation.  
17 A. Conversation? Certainly. I may have  
18 advised -- advised or -- to me, that allegations of  
19 misconduct in science, obviously, is -- whether it's  
20 real or not real, is the end of the person's career.  
21 Any hint of an allegation of misconduct in science,  
22 it raises eyebrows.  
23 Scientists -- the scientist community  
24 is a very small community. We all know each other.  
25 An allegation of someone -- and I may have

0098

1 advised -- *I may have told Dr. Bishayee, why don't*  
2 *you just leave research. I may have. And I*  
3 *probably did tell him that.*  
4 *And I suggested to him, why don't you*  
5 *go and work in radiation safety, one of the things*  
6 *that I did. I said, that's something related to*  
7 *your knowledge, it's an area of growth. You don't*  
8 *have to submit grants. You don't -- it's a secure*

9 area where you can have a very solid position. I  
10 most probably have said that to him.

11 Q. When did you have that -- do you have a  
12 recollection in terms of time frame?

13 A. No. The timing, no.

14 Q. In fact, he did move over there at some  
15 point in time?

16 A. He did move over there.

17 Q. Does that lead you to believe that he

18 was following your advice?

19 A. I have no idea. I have no idea. But  
20 I -- when I advised that, I have seen very prominent  
21 scientists from the radiation community; Clyde  
22 Greenstock is one of them, published several papers,  
23 ended up into this area of the Radiation Safety  
24 Atomic Energy of Canada, so I had ground to advise  
25 that.

0099

1 I had seen many prominent radiation  
2 researchers, not that -- I say prominent. Joseph  
3 Borsa had left basic research to go into food  
4 irradiation. That's a -- really made several  
5 discoveries. Preceded David Baltimore, he received  
6 the Nobel prize. It was done by Joe Borsa before  
7 him at UPenn and he abandoned research to go into  
8 food irradiation and I certainly, in some of the  
9 talks, that I had with Dr. Bishayee, and I had -- I  
10 continued on talking terms with Dr. Hill, Dr.  
11 Bishayee, Dr. Howell, Dr. Lenarczyk. All of them.  
12 I never stopped talking to any of them.

13 Q. Okay.

14 A. I spoke with Anupam the moment he left  
15 to go to his new job.

16 Q. But on the subject of his resignation,  
17 was there any other discussions that you can recall?

18 A. No. Other than I may -- I did probably  
19 say to him, and more than likely, *I did say to him,*  
20 *leave the area of research, go, whatever you --*

21 Q. Now, do you remember -- in or about  
22 August of 2001, do you recall having a conversation  
23 with Dr. Hill regarding Dr. Bishayee and Dr. Howell?

24 A. I had many discussions with Dr. Hill.  
25 Many. Whatever it was, whether it was in August. I

0100

1 always -- I mean, until probably we stopped talking  
2 about that case. I had discussions probably with  
3 Dr. Hill exchange of -- sitting in her office,  
4 meeting her in 2001, 2002.

5 Q. I'm specifically asking August 2001.

6 A. Maybe I did. In August, more than  
7 likely that I did, because we were in -- I was  
8 trying to see what I can -- if these two individuals  
9 can talk to each other rather than going -- that was  
10 my wish for them, come, you folks talk to each  
11 other.

12 Q. "You folks" we're referring to Dr. Hill

13 and Dr. Howell?

14 A. Dr. Hill and Dr. Howell, yes.

15 Q. So in or about this time, you say you  
16 engaged in certain discussions and efforts just  
17 trying to bring them together?

18 A. My own wish was to bring them together,  
19 to talk to each other.

20 Q. Beyond your wish, did you engage in any  
21 affirmative acts?

22 A. Affirmative act? That I told them I am  
23 not so sure, but I dreamed of some schemes,  
24 sometimes to have it, a party at my home. It's very  
25 dear for me to invite Dr. Hill. I thought of that.

0101

1 I told Sonia, most probably, you know,  
2 we can invite them together. Maybe they'll talk to  
3 each other.

4 Q. But beyond what you --

5 A. To them, I never did.

6 Q. Even if not them together, did you ever  
7 suggest separately, you know, to them, that you  
8 ought to think about doing something like this?

9 A. I wanted, when we went to Reno, Nevada,  
10 to find a way to bring them together.

11 Q. Okay.

12 A. To talk to each other. That I had on  
13 my mind to try to bring Dr. Hill, Dr. Howell, the  
14 whole lab.

15 Q. What was in your mind and what you did  
16 are two different things, and I just really want to  
17 know what, if anything, that you did in that respect  
18 to cause a manifestation of your wishes.

19 A. Obviously, it never happened, so --

20 Q. Well -- but, it may never have  
21 happened, but sometimes people try to make things  
22 happen. So, you know, if you look at a continuum  
23 between wishes to something happening, and there are  
24 efforts, did you ever do anything to try to make it  
25 happen, other than in your mind make a wish?

0102

1 A. I think, maybe, again, whatever it was  
2 in Reno, Nevada, I wanted to bring them together,  
3 but either when I spoke with Dr. Hill, it -- I  
4 didn't see a lot of responsiveness or something.  
5 You know, you stop talking to someone and hi, and  
6 then they would walk away, or something like that.

7 But not that Dr. Hill did anything

8 unpleasant or anything like that, no, but I felt  
9 it's not going to materialize.

10 Q. Isn't it a fact that you told Dr. Hill  
11 that Dr. Howell had handed a letter of resignation  
12 to Dr. Bishayee? Told him to sign it, told him not  
13 to come on campus, took away his keys and ID, and  
14 told him not to apply for research positions on this  
15 campus or in radiation biology?

16 A. I don't remember that.

17 Q. When you say you don't remember it, are  
18 you denying it or -- making such a statement, or is  
19 it that you just don't remember making such a  
20 statement? There's a difference.

21 A. The statement that you just made, I do  
22 not remember saying that, but if I did say  
23 something, if I did, because in my mind, I wanted to  
24 be a peacemaker. I know that Dr. Hill was very  
25 upset with Bishayee, that I may have -- I may, I

0103

1 may, because as I say, the spirit is to -- that,  
2 look, Dr. Howell, Bishayee will not be in the group,  
3 because she mentioned for many times, all what he  
4 has to do, Dr. Hill mentioned he has to get rid of  
5 Anupam.

6 Q. When did she say this to you?

7 A. Many times.

8 Q. When did she say this to you?

9 A. I don't remember but she said that at  
10 one time, probably we were going to a faculty  
11 meeting in radiology. That all what -- he's got to  
12 get rid of Anupam.

13 Q. And this was before or after the  
14 complaint?

15 A. After the complaint.

16 Q. After the complaint?

17 A. Obviously, after the complaint. Before  
18 the complaint, Dr. Hill wanted to -- I never could  
19 dream of anything that she had against Dr. Howell  
20 because that were -- on the first -- the second  
21 Gordon conference, which is the most prestigious  
22 conference in radiation biology, radiation oncology,  
23 my mentor, Jack Little, from Harvard School of  
24 Public Health was organizing that conference, and --  
25 yeah, and Dr. Little wanted to invite Roger to come

0104

1 and give a talk at Gordon conference, and Roger was  
2 ill at that time.

3 And we can tell that from my CV, when  
4 the Gordon conference, and what Dr. Hill said, let  
5 us maybe record Dr. Howell's talk, and so then it  
6 would be shown via video at the conference.

7 Q. So what you're telling me is that prior  
8 to the complaint, you understood Dr. Howell to have  
9 good relations with --

10 A. Yes.

11 Q. That's what you're saying?

12 A. Yes. Very warm relation. Warm  
13 relation. Because of that -- because of this -- of  
14 what I just said.

15 Q. And up until the time that she made the  
16 complaint against Dr. Bishayee, you knew, if I  
17 understood your earlier testimony, you knew of no  
18 complaint that she made about him or any motivations  
19 as to why she might want to get rid of him?

20 A. That's correct.

21 Q. And these discussions that you had,



22 that you say occurred between you and Dr. Hill about  
23 Dr. Hill saying, all he has to do is get rid of him  
24 occurred after the time she made the complaint?

25 A. Yes.

0105

1 Q. Now, isn't it a fact that you tried to  
2 persuade Dr. Howell to get rid of Dr. Bishayee?

3 A. No.

4 Q. Did you ever try to persuade Dr. Howell  
5 to retract the papers that contain the data that  
6 couldn't be replicated or confirmed?

7 A. Did I persuade him?

8 MR. FLYNN: Objection to form.

9 Go ahead.

10 Q. Did you attempt to persuade him?

11 A. No.

12 Q. Did you ever make a suggestion to that  
13 effect?

14 A. No, because I don't know if anything is  
15 wrong. I -- I -- you know.

16 Q. Did you ever have any conversations, or  
17 report to Dr. Baker any suspicions you had about  
18 Dr. Bishayee?

19 A. No. I went to Dr. Baker and I -- I  
20 went to him to tell him one thing. I said, can you  
21 do something to bring Dr. Hill and Dr. Howell to  
22 some understanding.

23 Q. When was that?

24 A. Well, the allegations were going on, so  
25 it must have been sometime after Dr. Hill made the

0106

1 allegation. I went specifically to his office.

2 Q. Was that a matter of a month, months,  
3 years?

4 A. Couple of months. Two to three months.  
5 I did go down to say, can you do something to bring  
6 them together.

7 Q. What did he say?

8 A. He said, nothing that I can do. It's  
9 out of my hands.

10 Q. Okay.

11 A. Because this thing did cost me -- for  
12 me -- obviously, we are a very small group. I'm a  
13 new faculty member, that this was undermining my  
14 performance, my productivity.

15 Q. Your performance?

16 A. Of course.

17 Q. Why is that?

18 A. Talking to Dr. Hill, talking with  
19 Dr. Howell, it poisoned an atmosphere. Two of my  
20 colleagues that I respect very much have a major  
21 misunderstanding. I am trying to submit my grant,  
22 establish a lab, and everything was very, very  
23 disturbing, and the mind -- it took a lot of my  
24 productivity. I'm sitting here today, I could be --  
25 I have eight, nine people in my lab. I could be

0107

1 there.  
2 Q. I understand you.  
3 A. It's, you know --  
4 Q. Now, to your recollection, did  
5 Dr. Howell ever relate to you a discussion he had  
6 with -- do you know who Dr. Putterman is?  
7 A. Yes, I know.  
8 Q. Who is Dr. Putterman?  
9 A. Her exact title, I am not sure, but she  
10 is a vice president at the University.  
11 Q. Did he ever relate to you a discussion  
12 that he had with Dr. Putterman regarding these  
13 matters, these complaints of Dr. Hill?  
14 A. No specifics.  
15 Q. Did he tell you he ever met with her  
16 concerning that?  
17 A. Yes. He said, I have to go and meet  
18 with Dr. Putterman regarding. He mentioned to me  
19 that, yes. And when I received your -- the  
20 subpoena, the first thing I did, I called  
21 Dr. Putterman.  
22 Q. You did?  
23 A. Yes, I did.  
24 Q. Why did you do that?  
25 A. I had no idea that I am party to this

0108

1 matter.  
2 Q. Okay.  
3 A. Because Dr. Hill really never mentioned  
4 anything to me, that I am somehow in here.  
5 Q. What did she say to you?  
6 A. Who?  
7 Q. Dr. Putterman.  
8 A. She -- what she mentioned to me is that  
9 this is -- it's a subpoena, then you have to appear.  
10 Q. Okay. Anything else?  
11 A. No.  
12 Q. Did you discuss your testimony at all?  
13 A. Absolutely not. I wouldn't even know  
14 what Dr. Putterman looks like, because only that  
15 telephone conversation.  
16 Q. You've met her face to face?  
17 A. No, I did not.  
18 Q. She never spoke to you at all during  
19 the course --  
20 A. No.  
21 Q. -- of this --  
22 A. No.  
23 Q. Let me again finish.  
24 During the course of all the  
25 investigations that went on?

0109

1 A. No, absolutely not.  
2 Q. Have you ever seen any documentation  
3 that Dr. Putterman prepared regarding Dr. Howell?  
4 A. No.  
5 Q. Before Dr. Bishayee resigned, did you

6 ever -- did Dr. Howell ever relate to you  
7 discussions that he had had with him about any kind  
8 of uncomfortable working conditions in the lab?

9 A. Repeat your question, please.

10 Q. I'll rephrase it.

11 Prior to the time Dr. Bishayee  
12 resigned, did Dr. Howell tell you he had spoken to  
13 him about these uncomfortable working conditions in  
14 the lab that you described?

15 A. No. No.

16 Q. Did he ever say to you that he felt  
17 Dr. Hill wouldn't leave Dr. Bishayee alone, and that  
18 was why he felt it was best for him to leave the  
19 lab?

20 A. No. No.

21 Q. Dr. Howell never said that to you?

22 A. Nothing that I remember, no.

23 Q. Did Dr. Howell ever tell you that he  
24 had encouraged Dr. Bishayee to find a position  
25 outside of the university entirely?

0110

1 A. No.

2 Q. No such discussions?

3 A. No.

4 Q. When you recommended to Dr. Bishayee  
5 that -- that he get out of research, and go to  
6 radiation safety, did Dr. Howell object to you, or  
7 voice any dissatisfaction with your having --

8 A. No.

9 Q. -- made such a suggestion to him?

10 A. No, not to me.

11 MR. FLYNN: Objection to form.

12 Q. But you have no recollection of Howell  
13 saying that he wanted Bishayee out of the university  
14 completely?

15 A. No.

16 Q. Did Dr. Howell ever tell you that he  
17 wouldn't give any letters of recommendation to  
18 Dr. Bishayee?

19 A. No.

20 Q. Did you write any letters of  
21 recommendation to Dr. Bishayee?

22 A. I did write letters of recommendation  
23 for Dr. Bishayee when he started to apply. That  
24 must be in the year before he went to his current  
25 position which, I presume, is in Ohio, teaching

0111

1 positions in pharmacy. I did write letters of  
2 recommendation for him.

3 Q. Did you make any comments regarding his  
4 research?

5 A. *His research? I made comments that I*  
6 *am -- I -- in his presentations, obviously, there*  
7 *were teaching positions that he gives clear*  
8 *presentations, which he did.*

9 Q. What about the quality of his research?  
10 Did you have any -- did you have any occasion --

11 A. I may have.  
12 Q. -- to comment?  
13 A. I have the letter.  
14 Q. You do?  
15 A. Yeah, I have the letter. It must be in  
16 the -- wherever he was, that the observation of a  
17 bystander effect in a three-dimensional system is a  
18 very important observation, and it's no secret that  
19 that paper is quoted. Is quoted probably by BF7  
20 Commission or NCRP report. I'm sure it was quoted  
21 by -- by reports of agencies in the field.  
22 Q. I'd like you, when you get back, I'll  
23 do a follow-up, to collect -- was there just one  
24 letter of recommendation that you wrote for him or  
25 more than one?

0112

1 A. No, no. I must have written two or  
2 three. It would be the same letter that I sent  
3 everywhere.  
4 Q. I'd like you to make copies of those,  
5 provide them to Mr. Flynn.  
6 MR. PINCUS: And I'll make a request,  
7 Scott, that I be provided copies of those.  
8 Thank you. I'll follow that up.  
9 Q. Did you observe any conduct on  
10 Dr. Hill's part that led you to believe that she  
11 wouldn't leave Dr. Bishayee alone after she made the  
12 complaint against him?  
13 A. No. Dr. Bishayee, what I found it very  
14 weird, continued to live in Dr. Hill's, you know,  
15 accommodation, that Dr. Hill had an apartment  
16 that --  
17 Q. She had -- there was an apartment  
18 down --  
19 A. There was nothing that I had seen from  
20 Dr. Hill against Dr. Bishayee. In fact -- and  
21 Dr. Bishayee got married, Dr. Hill came to his  
22 wedding reception. I was there. Dr. Hill came in.  
23 I don't think Dr. Howell was there, but myself and  
24 my wife were there. Dr. Hill walked in, gave a  
25 present, and she left.

0113

1 And Dr. Bishayee remained living in an  
2 apartment that Dr. Hill had for her late son, David.  
3 That was the only time I entered the apartment. The  
4 day I -- Anupam needed me to help him move. I went  
5 and I helped him move. And I entered the apartment.  
6 I did help him. He came newly married with his  
7 wife, and --  
8 Q. At the time Dr. Bishayee submitted his  
9 resignation, did Dr. Howell ever express to you an  
10 opinion, or opinions, regarding whether he believed  
11 him to be an excellent technician?  
12 A. An excellent technician? No, I have  
13 no -- whether he was good or he was bad.  
14 Q. Have you ever seen any of the  
15 performance evaluations that Dr. Howell prepared for

16 him?  
17 A. No.  
18 Q. What about Dr. Lenarczyk? At the time  
19 he left the lab, did Dr. Howell comment to you in  
20 regards to the quality of his work?  
21 A. He -- on the quality of his work? No.  
22 Q. Was it your understanding --  
23 A. *But myself, I have seen from him, he*  
24 *was competent, you know, to -- yeah, he was*  
25 *competent, so I had no reason to ask, or for*  
0114  
1 *Dr. Howell to tell me about him.*  
2 Q. *So, Dr. Lenarczyk did work for you?*  
3 A. *No, neither one of them. Nobody from*  
4 *Howell's lab worked for me.*  
5 Q. *But you had occasion to observe*  
6 *Dr. Lenarczyk engaged in research?*  
7 A. Both -- in research? No. In actual --  
8 you know, we have lab meetings in the lab meetings,  
9 so, yeah.  
10 Q. He appeared competent to you?  
11 A. *Yeah, certainly.* So is Anupam and  
12 Bishayee. Hard working, both of them.  
13 Q. Did Dr. Howell, at any time, express  
14 any dissatisfaction to you relating to  
15 Dr. Lenarczyk?  
16 A. No.  
17 Q. To your knowledge, based on the fact,  
18 you know, you're co-investigator on this grant now,  
19 has anyone in Dr. Howell's laboratory ever been able  
20 to confirm the bystander findings of Dr. Bishayee  
21 under the same exact conditions that Dr. Bishayee  
22 used?  
23 MR. FLYNN: Objection to form.  
24 Go ahead.  
25 A. Not that I know of. I am not aware of  
0115  
1 any of that.  
2 (Document, was marked Exhibit Azzam 11  
3 for identification) Azzam 11  
4 Q. Dr. Azzam I'm going to show you what I  
5 marked as Azzam 11.  
6 Have you ever seen this document?  
7 A. No.  
8 Q. You've never seen this?  
9 A. No.  
10 Q. Okay.  
11 MR. PINCUS: I'd make that -- I'll take  
12 that back.  
13 Q. So --  
14 A. I've never seen it, definitely, before.  
15 Q. Okay. I'm satisfied.  
16 A. No, I have not seen it.  
17 Q. A few moments ago you were relating  
18 that, you know, you knew that Bishayee had rented an  
19 apartment from Dr. Hill. I think it was located  
20 down in Newark in the Ivy Hill section. Isn't that

21 correct?  
22 A. Yes.  
23 Q. And that to your recollection, he  
24 continued to do so even after the complaint --  
25 A. Yes.

0116  
1 Q. -- was filed --  
2 A. Yes.  
3 Q. -- in 2001.  
4 And you indicated that you personally  
5 attended Dr. Bishayee's wedding. You personally  
6 attended Dr. Bishayee's wedding reception?  
7 A. No, I didn't attend his wedding  
8 hadding.  
9 Q. The wedding reception.  
10 A. When he came back from India, he had a  
11 reception in a restaurant.  
12 Q. In Montclair?  
13 A. Montclair.  
14 Q. And you attended that?  
15 A. Yes, I did.  
16 Q. Good restaurant. I've been there.  
17 A. It's all right.  
18 Q. And that was well over a year after the  
19 complaint had initially been filed. Is that --  
20 A. I don't remember.  
21 Q. Does that comport with your  
22 recollection?  
23 A. I don't remember if it was after, but  
24 it was quite a while after, I believe.  
25 Q. Dr. Hill, to your knowledge, attended  
0117  
1 that reception?  
2 A. I know that she came in, and she had a  
3 present. I saw her coming through the door. I  
4 want -- I would have liked if Dr. Hill sat with us  
5 because I always -- you know, Dr. Hill and I talked  
6 and it's -- I think I have a warm relationship to  
7 Dr. Hill, at least my feeling towards her and her  
8 family.  
9 Q. But you didn't sit together that  
10 occasion?  
11 A. I don't know even if Dr. Hill stayed  
12 there that day. I thought she may have. Later on I  
13 looked, she wasn't around. That's what I recall.  
14 She wasn't around anymore at the reception.  
15 Q. Did you see her engage in conversation  
16 with Dr. Bishayee at the reception?  
17 A. No.  
18 Q. Did you see anything at that reception  
19 that led you to believe that there was hostility  
20 between them?  
21 A. No. No.  
22 Q. Did you observe anything on that  
23 occasion that would lead you to believe that he had  
24 a bad relationship with Dr. Hill?  
25 A. That Anupam had bad relationship? No.

0118

1 But I knew that Dr. Hill, and he knew himself, had  
2 very, very serious allegations against him.

3 Q. So --

4 A. That is not a secret, unless he was  
5 totally out of his mind --

6 Q. That's why --

7 A. -- not to understand what he was up to,  
8 an allegation of misconduct, falsification of data.

9 Q. You used the word in your testimony  
10 that you found these things to be weird?

11 A. Yes. You know, if it was me, and  
12 somebody tells me -- well, I have something called  
13 self-respect. I would -- if it was me, I would have  
14 moved out immediately, not two seconds after.

15 Q. And probably wouldn't invite --

16 A. A split second.

17 Q. And you probably wouldn't invite that  
18 person to a wedding reception?

19 A. Probably, by courtesy, not to hurt the  
20 person. This is -- that's -- each one is entitled  
21 to his own opinion in these matters, but we are all  
22 forgiving, and we are all -- I am also a Christian,  
23 and a very devout Christian, that I probably would  
24 have a different attitude from what I just spoken  
25 now. But with the spur of the moment, my reaction

0119

1 would be negative, but later on, it will be to try  
2 to be as positive as possible.

3 Q. When Dr. Bishayee was leaving, in the

4 process of submitting his resignation in July of  
5 2001, did he ever indicate to you that rather than  
6 radiation safety, that he was desirous of going into  
7 molecular biology?

8 A. No.

9 Q. He had no such discussion?

10 A. No.

11 Q. Did he ever tell you that one of the  
12 reasons he was leaving was to upgrade his technical  
13 skills in technical biology?

14 A. No.

15 Q. In molecular biology. I apologize.

16 A. No, not to me anyway.

17 Q. Did he ever indicate to you that he was  
18 leaving to further his development in career of  
19 becoming an independent researcher?

20 A. No. He wanted to be an independent  
21 researcher. That, in fact, he applied for a job at  
22 the University of Iowa, which was, I think, more  
23 than a post doc. And he got invited for an  
24 interview because Dr. Bishayee, myself, met Doug  
25 Spitz in Dublin, Ireland, and Dr. Bishayee's

0120

1 performance was very good. Actually, his  
2 presentation was beyond my expectation. I must say  
3 that he did such a good job, and I presumed that

4 when he -- maybe when he contacted the people in  
5 Iowa, Dr. Spitz invited him to come and give a  
6 seminar there, but that's as far as I know about  
7 this. Dr. Spitz never asked me for any  
8 recommendation letter, or anything in that regard,  
9 and I know Dr. Spitz very well.

10 Q. You mentioned Dr. Payne --

11 A. Dr. Payne.

12 Q. -- at some point.

13 A. I know him very well as well.

14 Q. Did you have any discussions with  
15 Dr. Payne regarding Dr. Bishayee working for him?

16 A. Absolutely not, no.

17 Q. Were you ever made aware of the fact  
18 that Dr. Payne had offered to take him on --

19 A. No.

20 Q. -- in his lab?

21 A. No.

22 Q. You know of nothing in that regard?

23 A. No. I know that Anupam was in  
24 Dr. Payne's lab. I knew that, but I had very little  
25 interaction with Anupam at that time. I don't think

0121

1 it was beyond hi, hi, when I met him. I know  
2 exactly that I had extremely little, little  
3 interaction with him.

4 Q. When did he work for Dr. Payne, to your  
5 knowledge?

6 A. It must be beyond -- I know very well,  
7 because September 11 comes clear in my mind. It  
8 should be after September 11 that he worked in  
9 Dr. Payne's -- the reason I say that, that I --  
10 Dr. Payne was moving his lab. I know of that, but I  
11 knew subsequent to that, on September 11, and  
12 Dr. Bishayee was in Dr. Payne's lab as -- shortly  
13 after Dr. Payne came to the New Jersey Medical  
14 School.

15 Q. Did Dr. Bishayee ever indicate to you  
16 that he had a method of corresponding with Dr. Hill  
17 through emails?

18 A. No.

19 (Document, was marked Exhibit Azzam 12  
20 for identification)

21 Q. I'll show you what's been marked as  
22 Azzam 12.

23 Have you ever seen this document  
24 before?

25 A. No.

0122

1 Q. Did he ever indicate to you that he was  
2 preparing such a document for the purposes of the --  
3 for the purposes of the investigation that was  
4 ongoing?

5 A. No, but I know that Dr. Howell  
6 mentioned to me, I have to -- I am involved, I have  
7 to respond to things related to the matter, but I  
8 have not -- he did not discuss any of that.



9 I've never seen this document, no.  
10 I had obviously many discussions with  
11 Dr. Howell about why was this bystander effect not  
12 being observed, and it was -- it was me, I would  
13 say, it could be the cells, could be the serum,  
14 could be any sum of these. So discussing these  
15 items, certainly, I did a few discussions on what  
16 could be the reason of the lack of repeatability.

17 Q. But you were hypothesizing, weren't  
18 you?

19 A. Yes.

20 Q. Because if I understand you correctly,  
21 you know, for you to render any kind of opinion, as  
22 to what had been the reason why these experiments  
23 had not done -- you would have, just as you said  
24 here today, sit and review everything that had gone  
25 on. Correct?

0123

1 A. That is correct. And I wouldn't know  
2 if anything is right or wrong in those experiments.

3 In my opinion, always when we do an  
4 experiment, has to be to our best of our ability.  
5 Has to be an accurate, correct experiment. That's  
6 what science is all about.

7 Q. So when you were hypothesizing about  
8 what might be possible reasons, you say --

9 A. Certainly.

10 Q. -- you say, it might have been the  
11 cells, might have been the serum. What else?

12 A. Certainly. In these things, many of  
13 the cells and the serum, the culture matters, the  
14 incubators. Tissue culture is very, very sensitive,  
15 has many variables to control. V79, I've seen them  
16 change.

17 Q. What did you tell him about the cells?

18 A. The cells? What I say? My  
19 understanding, that they had lost the liquid  
20 nitrogen dewar. I know that they lost it. Because  
21 we were -- maybe Sonia was filling the liquid  
22 nitrogen. We would fill the --

23 Q. Did you say viewer or fill?

24 A. Dewar. To fill the liquid nitrogen,  
25 the Dewar.

0124

1 Q. Spell it.

2 A. D-E-W-A-R. Dewar. It's when we store  
3 cells in liquid nitrogen, and -- and I was present  
4 when they discovered there were no nitrogen in  
5 the -- the storage tank.

6 Q. When was this?

7 A. It was subsequent to -- I don't recall  
8 exactly when this had happened, and I don't even  
9 recall whether Anupam was in the lab or not.

10 Q. But this happened after the complaint?

11 A. I believe so.

12 Q. After Dr. Hill's complaint?

13 A. I believe after the complaint it has

14 happened. I believe so, yes. I believe so.  
15 Q. So the -- hold on a second.  
16 A. After -- also, I'm not 100 percent sure  
17 just to state myself --  
18 Q. Hold on. Let me interrupt you, please,  
19 because I want to make sure I understand what you're  
20 saying.  
21 There is something in which nitrogen is  
22 kept?  
23 A. No, you keep cells in a tank.  
24 Q. In a tank filled with nitrogen?  
25 A. Filled with nitrogen.

0125

1 Q. And that tank that contained the cells  
2 which they used for this experimentation --  
3 A. Yes.  
4 Q. -- disappeared?  
5 A. No. No. It didn't disappear at all.  
6 That tank was there, but when we opened  
7 it, it had no nitrogen because that tank -- my tank,  
8 you have to fill it every two weeks. Dr. Hill's  
9 tank, which I continued to fill until a couple of  
10 years ago, probably, you had -- it maintained  
11 nitrogen pretty good. Every month, probably, you  
12 had to fill it. Roger's tank you had to fill --  
13 maintain -- was a smaller tank, that it would  
14 maintain -- the nitrogen will not evaporate. It  
15 would take up to three months before you would need  
16 to fill it, and it was a very well insulated tank,  
17 as opposed to mine. Mine is probably the biggest,  
18 the most expensive, but you have to really -- it  
19 loses nitrogen, evaporates, so we have to keep on  
20 filling it --  
21 Q. Okay.  
22 A. -- continuously. And when we --  
23 because nitrogen -- my use of nitrogen is, you order  
24 a big tank, we always have excess nitrogen. So we  
25 share the nitrogen, in fact, among multiple labs.

0126

1 At that time, whether we shared it with  
2 Dr. Reveve or not, I don't recall. With  
3 Dr. Gardener. So we all filled the tanks and  
4 Dr. Reveve, my lab, I used to fill Dr. Hill's tank,  
5 and then we fill -- and Dr. Howell's people would  
6 fill their own tank, and when we came to give them  
7 the liquid nitrogen to fill that tank, that tank had  
8 failed.

9 These tanks can fail because if you  
10 bump them, if you come to my lab, you see my door, I  
11 have foam galore so nobody -- because we're short of  
12 space -- to bang the tank, and if you move it, you  
13 have to be very careful. If you break the seal on  
14 these tanks, they easy -- you easily can lose them.  
15 So someone who doesn't know what he's doing, they  
16 can break. If a janitor comes, he's waxing the  
17 floor, picking up the garbage --

18 Q. So, put a time frame on this. When did

19 this happen?

20 A. I do not really recall, Mr. Pincus,  
21 whether it was before the allegation or after the  
22 allegation. I do not recall.

23 Q. So you don't remember whether at the  
24 time you actually observed --

25 A. I don't recall.

0127

1 Q. -- Dr. Howell try to repeat one of the  
2 bystander experiments, whether, when he went to get  
3 the cells, there was a problem associated with it?

4 A. It was -- it was before the allegations  
5 happened that he lost his tank.

6 Maybe Dr. Hill would remember that  
7 better than me.

8 Q. If that happened, would there be any  
9 report or anything that would be prepared about  
10 that?

11 A. No. No. You wouldn't prepare.

12 Q. So what else about the cells, if  
13 anything, did you hypothesize might be -- and, by  
14 the way, let's assume there wasn't nitrogen in that  
15 tank.

16 A. The cells would die.

17 Q. Okay.

18 A. So they are good for nothing.

19 Q. Don't you oftentimes develop new  
20 generations of cells?

21 A. You ask other people to give you cells,  
22 or if you have them stored elsewhere, it can -- but  
23 in the case of the cells of Dr. Howell, these V79  
24 cells existed in culture for many, many years,  
25 probably 30, 40 years they have been in culture.

0128

1 These are not -- you know, beyond the point that I  
2 hypothesize, could be the cells -- these are  
3 transformed cells. They are not normal cells.

4 The cells that I have work with have  
5 contact inhibition. Cells that lose contact  
6 inhibition on the way to transformation.

7 Cancer cells don't have contact  
8 inhibition. They pile on top of each other, form a  
9 cancer. So, a cell can change from one subculture  
10 to the other. In fact, they do. Because they  
11 lose -- their chromosomes will change, so they will  
12 change.

13 I use -- I buy cells from the Coriell  
14 Institute. I freeze 30, 40 vials of them. I  
15 conduct my experiments only between passage 9 and  
16 passage 12, period. So, when I repeat, I go back to  
17 passage 9 to 12.

18 The reason passage 9, because they sell  
19 them to us passage 7. V79 cells don't benefit from  
20 this luxury.

21 Normally, Dr. Howell acquires these V79  
22 cells, I presume -- and Dr. Hill would know better  
23 than me -- I think from Dr. Casis at Harvard School

24 of Public Health, Ward Medical School, so these  
25 cells have been in culture for a long period of  
0129

1 time.

2 I'm not saying that they did something  
3 wrong, or something not wrong, but as a scientist,  
4 you tell me I work with V79. That's why I tell you,  
5 I don't work with V79. I want to distinguish and  
6 effect normal cells. I want to distinguish and  
7 effect normal cells, hopefully, *invivo*, in a rodent,  
8 or -- so, their cells, the V79, change continuously,  
9 so if you tell me the results, I'm not replicating,  
10 it may very well be that the V79 cells have changed.  
11 I've seen them change.

12 I worked for the paper when I came to  
13 shake your hand, I thought -- because this is an  
14 important paper, that's why I thought you may have  
15 read it, and we had the laugh in there.

16 This one distinguished, I think,  
17 radiation and heat sensitivity of cells or different  
18 phases of the cell cycle. I was a technician for  
19 Dr. Rappaport. We said at that time that cells in  
20 the S phase are sensitive to hyperthermia, while  
21 cells in S phase are resistant to radiation, so I  
22 thought that --

23 Q. None of this, did you attempt to relate  
24 back to the actual experiment?

25 A. No. *V79 cells will change, so to me,*  
0130

1 *it could be a reason. Serum another reason. When I*  
2 *buy serum -- I spent a lot of time, and we spend a*  
3 *lot of money to screen the serum.*

4 And Sonia, just this past year, she  
5 screened serum as least two times for the vendor to  
6 have sold a batch of serum that we see lacked, so if  
7 he worked with another batch of serum and now he  
8 went to new batch of serum, serum is very critical  
9 in these observations.

10 Q. And you suggested culture medium and  
11 incubators, too, to him?

12 A. Definitely.

13 Q. Anything else that you suggested to  
14 him?

15 A. That -- I guess, these the main things.

16 Q. That's all I needed to know. Thank  
17 you.

18 And you've never seen this document?

19 A. No.

20 Q. He never shared that with you or  
21 discussed it with you?

22 A. No, I have never seen that document.

23 Q. Did he ever indicate to you that in  
24 trying to explain to the committee, or to  
25 Dr. Putterman, or any other administrator, that  
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1 these things that you have been describing to me --

2 A. No --

3 Q. Let me ask the question.  
4 -- may have been the cause of his  
5 inability to replicate results?  
6 A. I didn't get it. Sorry.  
7 MR. PINCUS: Read that back, please.  
8 (The following is read back by the  
9 reporter:  
10 "Q Did he ever indicate to you that in  
11 trying to explain to the committee, or to Dr.  
12 Putterman, or any other administrator, that  
13 these things that you have been describing to  
14 me may have been the cause of his inability to  
15 replicate results?")  
16 A. I do not remember.  
17 Q. Fair enough.  
18 A. I don't remember. Whether at that time  
19 I mentioned the cells, the serum, I may have very  
20 well have said that to him. I may have said that to  
21 Dr. Hill as well, because I was in, really, a lot of  
22 communication with Dr. Howell and Dr. Hill and on a  
23 daily basis. So.  
24 I may have mentioned that to both of  
25 them.

0132

1 MR. FLYNN: We're done.  
2 MR. PINCUS: All right.  
3 Those are all the questions that I  
4 have, Dr. Azzam, I thank you for your time.  
5 Do you have any questions?  
6 MR. FLYNN: Nothing here.  
7  
8 (At this time there is a discussion  
9 held off the record.)  
10 (Witness excused at 12:44 p.m.)  
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0133

1 C E R T I F I C A T E  
2 I, CAROL T. PERRELLI, a Certified Shorthand  
3 Reporter and a Notary Public of the State of New  
4 Jersey, do hereby certify that prior to the  
5 commencement of the examination the witness was duly  
6 sworn by me.  
7 I DO FURTHER CERTIFY that the foregoing is a

8 true and accurate transcript of the testimony as taken  
9 stenographically by and before me at the date, time  
10 and place aforementioned.

11 I DO FURTHER CERTIFY that I am neither a  
12 relative nor employee, nor attorney or counsel to any  
13 parties involved; that I am neither related to nor  
14 employed by any such attorney or counsel, and that I  
15 am not financially interested in the action.

16  
17

18 CAROL T. PERRELLI,  
19 A NOTARY PUBLIC OF THE STATE OF NEW JERSEY  
20 My commission Expires: October 6, 2010  
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