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Title: INTERVIEW OF DR. YUQING LI

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Pages 81

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ADDENDUM

Page	Line	Correction and Reason for Correction
6	16	"cluster" not "class"
8	18	delete "with"
9	16	add "at" before "the"
12	22	"around" not "along"
13	4	delete "high and"
20	22	"80" not "88"
29	8	"50" not "15"
31	2	"waterbath" not "auto bus"
31	25-	delete "So condensate changes."
32	1	
33	9	"inactivate" to not "reactivate"
34	14	"failed" not "fair"
34	25	"ten" not "two"
35	2	"calulation" not "translation"
35	4-5-6	"million" not "milli"
36	20-21	delete "It's not"
		delete "Automatically" not
		"Methodically"
37	22	"regular" not "radio"
38	6	add "radio active" before
		"trash".
38	24-25	"hybridization" not "high dilation"
39	1	
39	1-2	delete, "initially slow then."
Page	1	Date 10/23 Signature <u>Jeffrey Li</u>

ADDENDUM

Page	Line	Correction and Reason for Correction
39	2	"for" not "to"
39	19	"we" not "I"
40	18	delete "We actually don't care".
47	25	"I" not "me"
49	5	"I belong to" not "I'm going ..."
49	19	"whether" not "when"
50	20	"The" not "These"
51	23	delete "might not usually"
52	1	"cultivated" not "calculated"
52	23	"3000" not "300"
53	11, 12	"million" not "milli"
53	15	"enzyme" not "end"
53	15	"exonuclease" not "X nucleus"
54	5	"component" not "complement"
54	25	delete "12:00"
60	14	"50" not "15"
61	23	"gloves" not "a glass"
62	7	"take off" not "take a"
62	13, 14, 16	"write" not "light"
70	10	"as" not "at"
72	2	add "day" before "we"
72	17	"with an" not "always on"
73	8	"the" not "ten"
73	13	"stupid" not "not stop"

ADDENDUM

Page	Line	Correction and Reason for Correction
74	12	"something to do with" not "getting go"
74	14	"businessness" not "bitterness"
75	19	"talking" not "impact"
78	10	"on" not "off"
78	16-18	"I can't remember whether they were clean or not because -- at least I couldn't get the readings of the high activity I detected on August 19."
75	21-22	"I work long" not "I work alone two"

1 UNITED STATES OF AMERICA
2 NUCLEAR REGULATORY COMMISSION

3 + + + + +

4 INCIDENT INVESTIGATION TEAM

5 + + + + +

6 INTERVIEW

7 OF

8 DR. YUQING LI

9 + + + + +

10 MASSACHUSETTS INSTITUTE OF TECHNOLOGY

11 + + + + +

12 FRIDAY,

13 OCTOBER 20, 1995

14 9:07 a.m.

15 + + + + +

16 INTERVIEWERS:

17 LAWRENCE L. ROBINSON

18 GREGGORY P. GONECONTO

19 SAMI SHERBINI

P-R-O-C-E-E-D-I-N-G-S

(9:07 a.m.)

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INTERVIEWER ROBINSON: It's Friday, August 20th, 1995. This is a continuation of the interview of Dr. Yuqing Li at Massachusetts Institute of Technology. The time is 9:07 a.m. in the morning.

Present at the interview are: Dr. Li; Larry Robinson with the NRC Office of Investigations; Gregory Goneconto, with the Office of Inspector General of the Nuclear Regulatory Commission. And this interview is being transcribed.

Dr. Li, I'm going to try to take you back to Sunday, August 13th, 1995, the day you went to the lab on Sunday. And I believe you said that that was kind of a short day.

DR. LI: Yes.

INTERVIEWER ROBINSON: And then you left one of your two prepared meals in the refrigerator. And you ended up eating that meal the next day, --

DR. LI: Yes.

INTERVIEWER ROBINSON: -- the Monday when you went in to work.

DR. LI: Yes.

INTERVIEWER ROBINSON: Where do you live, Dr. Li?

1 DR. LI: I live in Malden.

2 INTERVIEWER ROBINSON: Malden?

3 DR. LI: Yes, Massachusetts.

4 INTERVIEWER ROBINSON: What's your address up
5 there?

6 DR. LI: It's 157, 1-5-7, Pleasant Street,
7 P-L-E-A-S-A-N-T.

8 INTERVIEWER ROBINSON: Pleasant Street?

9 DR. LI: Yes, Apartment 407.

10 INTERVIEWER ROBINSON: Apartment 407, Malden?

11 DR. LI: Malden, M-A-L-D-E-N.

12 INTERVIEWER ROBINSON: Mass.

13 DR. LI: MA 02148, 0-2-1-4-8.

14 INTERVIEWER ROBINSON: 0-2-1-4-8?

15 DR. LI: Yes.

16 INTERVIEWER ROBINSON: And what's your phone
17 number at your residence?

18 DR. LI: It's 617.

19 INTERVIEWER ROBINSON: Six-one-seven.

20 DR. LI: Three-two-two.

21 INTERVIEWER ROBINSON: Three-two-two.

22 DR. LI: Four-five-zero-three.

23 INTERVIEWER ROBINSON: Four-five-zero-three.

24 DR. LI: Yes.

25 INTERVIEWER ROBINSON: And how do you normally

1 get to work in the morning?

2 DR. LI: During weekdays our family has one car
3 -- had one car at that time -- point. But right now we
4 have two cars. So it's okay. At that point we only had
5 one car.

6 INTERVIEWER ROBINSON: Okay.

7 DR. LI: So during weekdays my wife drives that
8 car to the work. And I usually took subways to MIT.

9 INTERVIEWER ROBINSON: And what time did you
10 arrive at work on Sunday, August 13th?

11 DR. LI: I keep a log usually at when I arrive
12 at MIT and when I leave MIT --

13 INTERVIEWER ROBINSON: Good.

14 DR. LI: -- because I want to calculate how
15 many hours I spend on research at MIT.

16 INTERVIEWER ROBINSON: Yes. That's --

17 DR. LI: In this way I can keep track whether I
18 wasted time or not. So, according to this log, which I
19 already made a copy for you, --

20 INTERVIEWER ROBINSON: Right.

21 DR. LI: -- I should arrive at MIT at 10:00
22 o'clock.

23 INTERVIEWER GONECONTO: And that's Sunday?

24 DR. LI: Sunday, yes.

25 INTERVIEWER ROBINSON: 10:00 o'clock Sunday

1 morning?

2 DR. LI: Yes, Sunday morning.

3 INTERVIEWER ROBINSON: Okay.

4 DR. LI: We drove the car to MIT, yes.

5 INTERVIEWER ROBINSON: Okay. That's on Sunday.

6 You drove? You and your wife drove the car?

7 DR. LI: Yes, yes.

8 INTERVIEWER ROBINSON: And she dropped you off
9 and then went home or --

10 DR. LI: No. Usually it's not the case.

11 Usually I would say as a scientist it's usually, as I told
12 you, in first day. Usually it's a no-weekend week.

13 INTERVIEWER ROBINSON: Yes.

14 DR. LI: Usually you work very hard. So and
15 usually my wife will accompany me to the MIT. And then she
16 just maybe is reading books at library during -- we don't
17 have any children or sometimes she check messages in MIT's
18 computer, stuff like that.

19 INTERVIEWER ROBINSON: I see.

20 DR. LI: So that's why she and I came to MIT
21 together.

22 INTERVIEWER ROBINSON: Okay.

23 DR. LI: Sunday, yes, 10:00 o'clock, yes.

24 INTERVIEWER ROBINSON: That morning did she
25 come up to the lab with you? Does she often come into the

1 lab with you?

2 DR. LI: Yes, yes, yes, usually come into lab
3 with me. And usually she will drink some water in water
4 cooler in the lab. Then she will wander off into campus,
5 either to library or to the computer room, just check
6 E-mail or just spend time there.

7 INTERVIEWER ROBINSON: Okay.

8 DR. LI: Then I can work usually. This is the
9 kind of pattern I usually have, yes.

10 INTERVIEWER ROBINSON: And on that Sunday, the
11 13th, what did she do after you got to the lab? Did she
12 leave or did she stay with you in the lab or --

13 DR. LI: She did not stay in the lab. Either
14 she went to the library, I believe, I mean, MIT library to
15 read maybe novels, magazines over there, or she went to the
16 MIT computer class just to play with computer or stuff like
17 that, yes.

18 INTERVIEWER ROBINSON: Okay. And you had your
19 two meals that you brought in with you?

20 DR. LI: Yes.

21 INTERVIEWER ROBINSON: Do you always wrap those
22 meals in the same kind of container?

23 DR. LI: I usually use plastic shopping bag
24 from market. So I usually wrap the Tupperware box in that
25 kind of thing together with fruits, together with fruits

1 sometimes I bring with me or maybe tomato, stuff like that.

2 INTERVIEWER ROBINSON: Okay. Okay. And did
3 you have both meals in the same plastic bag?

4 DR. LI: Yes. Same plastic bag, yes.

5 INTERVIEWER ROBINSON: In separate Tupperware
6 containers?

7 DR. LI: Yes, sure. Yes.

8 INTERVIEWER ROBINSON: And two meals worth of
9 fruit? They're just -- did you have --

10 DR. LI: This I cannot remember. It varies day
11 from day. Sometime I don't bring in fruit.

12 INTERVIEWER ROBINSON: Okay.

13 DR. LI: Sometime I bring only for dinner.

14 Sometime I bring in two pieces, like one apple, one banana.
15 And it's difficult to determine, yes, fruit. I will always
16 eat one box of rice, Tupperware box of rice.

17 INTERVIEWER ROBINSON: So all of the food was
18 wrapped in the one plastic bag that day?

19 DR. LI: Yes, yes, usually, yes.

20 INTERVIEWER ROBINSON: And usually you use
21 those plastic grocery bags every day when you bring in your
22 meals?

23 DR. LI: Yes, yes, yes.

24 INTERVIEWER ROBINSON: So someone would be able
25 to recognize that that might be your food in that bag or

1 are there a lot of plastic bags in the refrigerator?

2 DR. LI: There should be a lot of plastic bags
3 in there. My plastic box, Tupperware box, is special. I
4 don't think any other post-doc uses or any other personnel
5 in the lab use the same type of plastic ware I use.

6 INTERVIEWER ROBINSON: Describe that box a
7 little bit.

8 DR. LI: I have two type of the box. One is a
9 long one, like this big. It's a flat one, I think six-cup
10 box. And it's a slightly yellow on top.

11 INTERVIEWER ROBINSON: Yellow?

12 DR. LI: Yes, yellow on top. I have two of
13 these. And I have 8 or 10 around a 4-cup box with a cap,
14 screw cap, on the top. And no one else use that type of
15 box in the lab.

16 INTERVIEWER ROBINSON: Do you ever bring in
17 anything to drink with your meals?

18 DR. LI: No. I always drink with spring water
19 in the lab.

20 INTERVIEWER ROBINSON: The spring water --

21 DR. LI: In the lab.

22 INTERVIEWER ROBINSON: -- from the water
23 cooler?

24 DR. LI: Yes, from the water cooler. Yes.

25 INTERVIEWER ROBINSON: As you come into the

1 lab, where is the refrigerator located where you put your
2 food in?

3 DR. LI: It's near the entrance, right near the
4 entrance, near the copy machine. So we only have one small
5 refrigerator for the whole lab. So when I open the door,
6 usually I always check the fax because there is a fax
7 machine along the way and also my mailbox. And then I put
8 my food into that refrigerator, yes.

9 INTERVIEWER ROBINSON: And I understand when
10 you eat your food, you eat in the conference room. Is that
11 correct?

12 DR. LI: Yes except on weekend.

13 INTERVIEWER ROBINSON: Oh, okay.

14 DR. LI: On weekend sometime because I have --
15 hope you understand. Usually if you look at my log book, I
16 usually work 12 hour or 12 and a half hour the MIT.

17 INTERVIEWER ROBINSON: Okay. Long days.

18 DR. LI: Yes. I usually don't have a chance to
19 eat together with my wife. But on weekend if my wife came
20 to MIT, usually we eat together, either lunch or dinner, so
21 depending on the occasion. So I believe on Sunday we had
22 lunch together.

23 INTERVIEWER ROBINSON: And did you eat one of
24 your meals for lunch?

25 DR. LI: Yes, yes.

1 INTERVIEWER ROBINSON: Where did you eat?

2 DR. LI: With my wife?

3 INTERVIEWER ROBINSON: With your wife.

4 DR. LI: Yes. With my wife, we usually eats at
5 cafeteria in the third floor, not in the conference room.

6 INTERVIEWER ROBINSON: And that's where you ate
7 on the 13th?

8 DR. LI: Yes, I'm pretty positive. Yes.

9 INTERVIEWER ROBINSON: Okay. And when you ate
10 that meal down in the cafeteria, did you just get some
11 water or liquid from the cafeteria or did you bring water
12 from the water cooler down with you? Do you remember?

13 DR. LI: Usually we don't bring water with us
14 to the cafeteria because usually what we do is we eat the
15 food first, and then we go back to the -- to a sink near
16 the conference room. We wash the Tupperware box a little
17 bit.

18 And then my wife would take my coffee mug and
19 drink water at the water cooler.

20 INTERVIEWER ROBINSON: Okay. The water cooler
21 down in the cafeteria area?

22 DR. LI: No, no. In cafeteria we don't have a
23 water cooler. In the conference room, in our conference
24 room, we have a water cooler.

25 INTERVIEWER ROBINSON: Maybe I was thinking of

1 something else. What did you drink when you ate lunch with
2 your wife on Sunday?

3 DR. LI: Oh, we don't drink. Usually we don't
4 drink.

5 INTERVIEWER ROBINSON: Oh, you don't drink at
6 all?

7 DR. LI: Yes. We don't drink at all. Usually
8 we finish the lunch or dinner, finish the food first, and
9 then we drink. It's different style.

10 INTERVIEWER ROBINSON: Okay. And where did you
11 say the lab water cooler is located?

12 DR. LI: The lab water cooler is located -- not
13 lab. I would say it's floor lab water cooler. It's for
14 the entire floor. It is located in the third floor
15 conference room.

16 INTERVIEWER ROBINSON: Okay. Okay. On Sunday,
17 the 13th, while you were in the lab building or in the
18 cancer research building, did you eat or drink anything
19 else other than your prepared food or the water from the
20 water cooler?

21 DR. LI: No.

22 INTERVIEWER ROBINSON: Were you working with
23 isotope on the 13th, on Sunday, the 13th?

24 DR. LI: On Sunday, the 13th.

25 INTERVIEWER ROBINSON: I think your record that

1 you gave to us indicated that you -- no, that doesn't --
2 yes.

3 DR. LI: Yes, I have a -- yes. It's not -- I
4 didn't work with isotope.

5 INTERVIEWER ROBINSON: On the 13th?

6 DR. LI: Yes, yes. This is for the past two
7 months. I used August 11th and then 14th and 19th.

8 INTERVIEWER ROBINSON: So you were not working
9 with isotope on Sunday, the 13th. How long were you in the
10 lab on Sunday, the 13th? When did you leave the lab on
11 Sunday, the 13th?

12 DR. LI: Yes. So I left around 3:30.

13 INTERVIEWER ROBINSON: 3:30?

14 DR. LI: In the afternoon.

15 INTERVIEWER ROBINSON: And after you ate lunch
16 with your wife, did she go back to the library or --

17 DR. LI: No, no. We were trying to buy a
18 Toyota car at that period. So we both drove to Woburn
19 Foreign Motors, -- it's a car dealer -- to look at the
20 Avalons, the Toyota cars they have. Yes.

21 INTERVIEWER ROBINSON: What time was that?

22 DR. LI: It's along 12:00 o'clock. So we left
23 MIT around 12:00 o'clock, drove to this car dealer, and we
24 negotiated a price over there for about maybe half an hour.
25 And then we drove back.

1 INTERVIEWER ROBINSON: Was there anyone else in
2 the lab with you on the 13th, on Sunday, the 13th?

3 DR. LI: A lot of -- usually our lab is pretty
4 dynamic, pretty high and hard working. So on that day I
5 can't remember exactly who was there. But I believe Dr.
6 Ming Xu was there, but I'm not 100 percent positive because
7 I vaguely remember when I came back from Toyota dealer I
8 talked to him about the visit because he bought a car I
9 wanted to buy a few months ago. So I just want to ask him
10 what's the pricing like, whether the price offer is good or
11 not.

12 But I might mixed it up with Monday. I'm not
13 sure whether I talked to Ming Xu on Monday or on Sunday.
14 But I think it's probably on Sunday.

15 INTERVIEWER ROBINSON: Okay. And trying --

16 DR. LI: It's not in my notebook. That's why
17 I'm not 100 percent sure. Yes. I vaguely remember either
18 I talked that day to Ming Xu or on Monday to Ming Xu about
19 this. Yes.

20 INTERVIEWER ROBINSON: And trying to
21 concentrate now on remembering on Sunday, what --

22 DR. LI: Yes.

23 INTERVIEWER ROBINSON: Maybe there were many
24 people in the lab that you don't recall, but is there
25 anyone else that you can recall that was in the lab on Sunday?

1 DR. LI: On Sunday? Ming Xu.

2 INTERVIEWER ROBINSON: Ming Xu?

3 DR. LI: Yes. One thing is I might have
4 discussed with him about the price of this, the car I want
5 to buy, the same car I want to buy. Another thing is short
6 -- maybe shortly before I drove off to the car dealer I
7 talked to him, I believe. I think he was in the lab, yes.

8 INTERVIEWER ROBINSON: Anyone else?

9 DR. LI: I cannot remember.

10 INTERVIEWER ROBINSON: And is it that you can't
11 remember anyone else being in the lab or were there other
12 people in the lab that you can't remember who they were?

13 DR. LI: There were lots of people. I think at
14 least four or five people were in the lab. But usually
15 Ming Xu is my close friend.

16 INTERVIEWER ROBINSON: Yes.

17 DR. LI: And he and I usually talk a lot, --

18 INTERVIEWER ROBINSON: Sure.

19 DR. LI: -- partly because we were at the same
20 state. He is going to leave the lab in a few months to
21 become a faculty member in another university.

22 INTERVIEWER ROBINSON: Oh, okay.

23 DR. LI: So we exchange information a lot, how
24 to negotiate with the university to get the package, how to
25 remodel in the lab or how to buy equipment.

1 INTERVIEWER ROBINSON: Where is he going?

2 DR. LI: University of Cincinnati.

3 INTERVIEWER ROBINSON: Illinois, Ohio. You may
4 be reasonably close.

5 DR. LI: Yes. And we talk about science a lot.
6 In other words, we check each other's science a lot.
7 That's why I usually always talk to him almost a lot of
8 times.

9 INTERVIEWER ROBINSON: And you went to look for
10 the car. And about what time did you get back? Is that in
11 your log?

12 DR. LI: It's not in my log. I believe it's
13 around 2:30 to 3:00 o'clock.

14 INTERVIEWER ROBINSON: And what did you do
15 then? I guess you were saying that it was taking some time
16 for one of your experiments to proceed. And you left the
17 lab and then came back to look at the results of that?

18 DR. LI: No, no, no. As the log indicates,
19 first I developed IP plates. Developed IP plates means you
20 look at the result you got yesterday or something like
21 that. Okay?

22 So I developed the IP plates and found Southern
23 failed. Southern is an experiment.

24 INTERVIEWER ROBINSON: Okay.

25 DR. LI: Just remember it's a type of

1 experiment. It failed. Then literature for PCR labeling.
2 So then I did literature research, how to do this. I
3 believe this was done at the science library in Hayden,
4 Hayden Science Library. It's an MIT science library.

5 INTERVIEWER ROBINSON: So you left the lab?

6 DR. LI: Left the lab. So I believe I left the
7 lab around 10:00 o'clock, around 10:30. So it only takes
8 about 30 minutes to finish the first 2 step.

9 And I should went to the lab -- I should go to
10 the science library for about one hour and a one hour and a
11 half to find the literature related to the method I used.
12 And then I believe I copied one, copied one or two
13 literatures related to this method.

14 And I came back. It's approximately 12:00
15 o'clock because usually we -- I have appointment with my
16 wife to eat together at 12:00 o'clock. So that's what
17 happened up to 12:00 o'clock.

18 And then after that we should have drive
19 immediately to that car dealer.

20 INTERVIEWER ROBINSON: Didn't you eat lunch
21 with your wife in the cafeteria first?

22 DR. LI: First. First, yes. After that we --

23 INTERVIEWER ROBINSON: Then you go immediately
24 to the car dealer?

25 DR. LI: Yes, yes, because it saves us time.

1 We don't have to rest. We rest in the car, and we drive in
2 there. Yes.

3 INTERVIEWER ROBINSON: Okay. And then you come
4 back from the car dealer?

5 DR. LI: Yes.

6 INTERVIEWER ROBINSON: And then what did you
7 do?

8 DR. LI: That's what I told you is I vaguely
9 remember. I probably discussed with Dr. Ming Xu about what
10 I encountered in car dealer and asked him opinion. But I'm
11 not 100 percent sure because it's not event recorded in
12 here. Yes.

13 INTERVIEWER ROBINSON: Did you do anything more
14 with respect to any experiments --

15 DR. LI: Oh, yes.

16 INTERVIEWER ROBINSON: -- when you came back to
17 the lab?

18 DR. LI: Yes. After I talked to Ming Xu, if
19 that's the event, I vague remember I was still starting the
20 literature and planning the experiment and was about to do
21 the experiment because if you want to do the experiment you
22 have first to write on a piece of paper what you want to
23 do.

24 Then my wife came in, and she said she was not
25 feeling well, she was feeling headache and stuff like that.

1 And then I decided to send her home and to work at home. I
2 mean, I don't have to do experiment. I can read papers at
3 home --

4 INTERVIEWER ROBINSON: Right. Sure.

5 DR. LI: -- or search literatures from home. I
6 have computer at home. So you have to understand it's
7 difficult. When your wife is sick, you cannot work. You
8 --

9 INTERVIEWER ROBINSON: I understand. Very,
10 very much I understand.

11 DR. LI: So that's why I left another box in
12 the refrigerator. I usually suppose work until 7:00 or
13 8:00, maybe 9:00 o'clock.

14 INTERVIEWER ROBINSON: Even on Sunday?

15 DR. LI: On Sunday, all weekend. It's not a
16 big difference whether it's Sunday or another day. We just
17 started late. We came in late usually. Usually on weekday
18 I came to lab around 8:00 to 8:30, something like that. On
19 weekends it's like 9:00 to 10:00.

20 So that's why I left a little bit earlier than
21 planned to home. And then we -- according to the credit
22 report. I have I didn't remember that, but I checked with
23 credit report.

24 So I know I should have driven to the
25 supermarket in Chinatown because I'm Chinese. We cook

1 Chinese type of food. So we needed to usually shop at
2 Chinese supermarket.

3 INTERVIEWER ROBINSON: Does it show the name of
4 that supermarket?

5 DR. LI: Yes. It's called 88, not 88,
6 Supermarket, Boston. So we paid 35 or 36 dollar for some
7 food and material, vegetables, stuff like that. And we
8 drove home to cook for the next week's lunch box.

9 INTERVIEWER ROBINSON: Okay. Backing up just a
10 little bit, after you ate lunch with your wife in the
11 cafeteria and you came back up and had a drink from the
12 water cooler --

13 DR. LI: I'm not 100 percent sure I had a
14 drink. My wife usually always had one drink after lunch at
15 MIT. But for me I usually don't drink a lot of water.
16 It's in sharp contrast to my wife. She drinks a lot
17 continuously, like several liters a day. I drink usually
18 once or twice at MIT.

19 INTERVIEWER ROBINSON: But you never get a can
20 of Coke or anything like that? It's always the water from
21 the water --

22 DR. LI: It's always the spring water. I like
23 to drink spring water.

24 INTERVIEWER ROBINSON: Did you have anything
25 else to eat or drink at the lab after you got back from the

1 car dealership?

2 DR. LI: No, no. This is 100 percent. I'm
3 positive I didn't drink anything or eat anything after I
4 come back from car dealership.

5 INTERVIEWER ROBINSON: And you didn't really
6 get a chance to do any more research there because your
7 wife was feeling ill?

8 DR. LI: Yes.

9 INTERVIEWER ROBINSON: You started home,
10 stopped at the grocery store, --

11 DR. LI: Yes.

12 INTERVIEWER ROBINSON: -- and then went
13 straight home from the grocery store or went home?

14 DR. LI: Yes, I think directly. And then we
15 cooked for the next three or four days. Yes.

16 INTERVIEWER ROBINSON: And you had left one
17 meal in the refrigerator?

18 DR. LI: Yes, one box of meal.

19 INTERVIEWER ROBINSON: Was there any fruit in
20 the meal that was left in the refrigerator?

21 DR. LI: I cannot remember. Usually it's not
22 the case. I would say it's 88 or 90 percent there
23 shouldn't be any fruit in there because if I bring in
24 fruits, maybe 90 percent or 80 percent chance I only bring
25 one. Usually I seldom bring in two. Okay? If I bring in

1 one, usually I never eat that for dinner. I usually either
2 eat immediately after lunch or I eat that around 4:00
3 o'clock, just as a snack.

4 INTERVIEWER ROBINSON: And you don't recall
5 whether you ate that fruit down in the cafeteria with your
6 wife for lunch?

7 DR. LI: I cannot recall. But if I bring in
8 one, I should have eaten that already in the lunch. So my
9 -- in other words, my impression is my judgment is that I
10 didn't leave any fruits in that pack, only a box of food.

11 INTERVIEWER ROBINSON: When you left the lab
12 that day, was Ming Xu still there?

13 DR. LI: I believe so, yes.

14 INTERVIEWER ROBINSON: Were other people still
15 there?

16 DR. LI: About five or six people, yes.

17 INTERVIEWER ROBINSON: Can you remember any of
18 them, any of those other five or six people?

19 DR. LI: Oh, yes. On my way out I passed the
20 -- a room next to the Dr. Tonegawa's office. I don't know
21 the room number. Okay? It's on my way out. I think one
22 or two -- I think one of the Japanese post-doc in the lab
23 -- his name is Takuji Iwasato.

24 INTERVIEWER ROBINSON: Iwasato?

25 DR. LI: Yes.

1 INTERVIEWER ROBINSON: Okay.

2 DR. LI: Because his desk is the desk outside
3 of Dr. Tonegawa's office. I vaguely remember I looked over
4 there and I saw him.

5 INTERVIEWER ROBINSON: And was there anybody
6 with him?

7 DR. LI: Probably Toshi was there, too, but all
8 of these are not 100. It's -- I'm trying to figure
9 picture. It might mixed with something else, maybe other
10 day. You know, it's two months already.

11 INTERVIEWER ROBINSON: Yes. That's --

12 DR. LI: Toshikuni Sasaoka, yes. He's a
13 Japanese post-doc sitting next to Taku, who was there, too,
14 but I'm not positive. But I'm pretty positive Takuji was
15 probably there.

16 INTERVIEWER ROBINSON: Okay.

17 DR. LI: Yes.

18 INTERVIEWER ROBINSON: Any of the other three
19 or four people that may have been there?

20 DR. LI: A lady sitting next to me, a post-doc
21 fellow, Dr. Jie Shen.

22 INTERVIEWER ROBINSON: Jie Shen?

23 DR. LI: Yes, J-I-E S-H-E-N.

24 INTERVIEWER ROBINSON: Okay.

25 DR. LI: Yes, yes. I think she was there, but

1 it's not 100 percent sure. I'm trying to recall.

2 INTERVIEWER ROBINSON: Right. I understand.

3 DR. LI: I vaguely --

4 INTERVIEWER ROBINSON: Let's go off the record
5 for just a minute. It's now 9:35, and we're off the
6 record.

7 (Whereupon, the foregoing matter went off the
8 record at 9:35 a.m. and went back on the record
9 at 9:45 a.m.)

10 INTERVIEWER ROBINSON: It is now 9:45 a.m. And
11 we're back on the record. For the record, Mr. Sami
12 Sherbini from the NRC has joined the interview. And Mr.
13 Gregg Goneconto has left the interview. And Mr. Robinson
14 is still here.

15 INTERVIEWER SHERBINI: One thing I need to
16 know, Dr. Li, is you described your experiments, the
17 experiments you were doing on Sunday.

18 DR. LI: Yes.

19 INTERVIEWER SHERBINI: And I just wanted to
20 understand the mechanics of the experiment. In other words
21 --

22 DR. LI: How I do the experiment.

23 INTERVIEWER SHERBINI: Yes, what things you
24 have to pick up and put down, where you get them, like
25 that.

1 DR. LI: So let me get the notebook first.
2 INTERVIEWER SHERBINI: Sure.
3 DR. LI: I have a two-page note for that date.
4 INTERVIEWER SHERBINI: Good. Okay.
5 DR. LI: So which date? So 14th or 13th?
6 INTERVIEWER SHERBINI: August --
7 DR. LI: Fourteenth?
8 INTERVIEWER SHERBINI: The 14th is the --
9 INTERVIEWER ROBINSON: The 14th is the day that
10 I believe he used isotope in his experiments.
11 INTERVIEWER SHERBINI: Okay.
12 INTERVIEWER ROBINSON: He did not use isotope
13 on the 13th.
14 INTERVIEWER SHERBINI: Okay. So maybe we
15 should talk on the 14th, then.
16 INTERVIEWER ROBINSON: I will tell you that in
17 the early part of the interview today, Sami, that he and I
18 have gone over pretty much in detail what he did on the
19 13th.
20 INTERVIEWER SHERBINI: Okay.
21 INTERVIEWER ROBINSON: And it did not involve
22 the use of isotope.
23 INTERVIEWER SHERBINI: Okay. So then the --
24 DR. LI: Sorry. I made a mistake.
25 INTERVIEWER ROBINSON: Oh, okay.

1 DR. LI: I'm in the notebook right now. I used
2 a little bit isotope.

3 INTERVIEWER ROBINSON: On the 13th?

4 DR. LI: Not used the isotope. I handled
5 isotope a little bit.

6 INTERVIEWER ROBINSON: Well, yes. Sami may
7 want to talk to you about that. Can we have a copy of that
8 notebook?

9 DR. LI: I'll give you, yes, yes, yes. I'm
10 going to give you the whole thing of this notebook. I'm
11 sorry I made a mistake.

12 INTERVIEWER ROBINSON: Okay.

13 DR. LI: So on the 13th.

14 INTERVIEWER SHERBINI: Yes.

15 DR. LI: So, as I said, I developed an IP
16 plate. And the Southern blot failed, like it's in my log
17 book. And then, actually, I measured the two-lambda probe
18 solution we use. We call it probe solution.

19 INTERVIEWER SHERBINI: Two-lambda probe
20 solution?

21 DR. LI: Yes. I mean two microliter. So all
22 the isotope I handled that day, actually, take two lambda
23 out of --

24 INTERVIEWER SHERBINI: Of the vial?

25 DR. LI: A solution, a probe solution. So

1 maybe I -- this I cannot tell. Maybe I -- let me see.
2 This is probably either I left previously. Usually when
3 you do experiment, you take two lambda out.

4 INTERVIEWER SHERBINI: Where does the
5 lambda come from?

6 DR. LI: The two lambda was the -- when you
7 finish labeling out the probe, you add a spermidine into
8 that, -- spermidine is a chemical -- into that DNA
9 solution. And the DNA precipitates. And you remove the
10 supernatant.

11 Usually I take two microliter or two lambda out
12 of that supernatant to check how much in that solution.
13 And on some precipitate usually is dissolved in a mixture
14 of solutions. And then I usually also take two lambda.

15 INTERVIEWER SHERBINI: Okay. At what point
16 does the P-32 come in?

17 DR. LI: Throughout this process P-32 is being
18 --

19 INTERVIEWER SHERBINI: At that point do you put
20 it in? I mean, there should be at some time --

21 DR. LI: Oh, I see. So when you start the
22 labeling reaction.

23 INTERVIEWER SHERBINI: Okay. That's when the
24 P-32 comes in?

25 DR. LI: Yes, yes.

1 INTERVIEWER SHERBINI: Labeling?

2 DR. LI: Yes, labeling. Okay.

3 INTERVIEWER SHERBINI: How do you do the
4 labeling?

5 DR. LI: Through labeling usually we -- to do
6 the labeling usually we add as seen on this page. So there
7 are two types of labeling I use. One is called random
8 primer labeling. Another one is called a PCR labeling.

9 INTERVIEWER SHERBINI: PCR?

10 DR. LI: Yes, PCR labeling. Random primer
11 labeling -- oh, sorry. There is another type of labeling.
12 Okay. So I just told you two type of labeling. The third
13 one is called a nick translation.

14 INTERVIEWER SHERBINI: Nick translation?

15 DR. LI: Yes, nick translation. So since the
16 probe I was using was very short, it was only maybe one to
17 two hundred base pairs. So DNA was very short. Random
18 primer method didn't work well with short DNA.

19 INTERVIEWER SHERBINI: Is that the one you
20 tried on the 13th?

21 DR. LI: Yes, yes.

22 INTERVIEWER SHERBINI: You tried random?

23 DR. LI: Yes. A lot of this period I have a
24 problem to label this piece of DNA because this piece of
25 DNA is very short. It's only maybe 170 or 160 base pairs

1 long.

2 To label this type of probe effectively with
3 random primer method, you need at least 300 base pair,
4 maybe 250 base pair. But that particular one I was using
5 was only 170, 160. So it's under that limit. So that's
6 why it didn't work well.

7 And also I tried a nick translation.

8 INTERVIEWER SHERBINI: Also on the 13th?

9 DR. LI: Not on the 13th. It's on 11th.

10 INTERVIEWER SHERBINI: Oh, you used the --

11 DR. LI: I did the labeling on 11th.

12 INTERVIEWER SHERBINI: So you used P-32 also on
13 the 11th?

14 DR. LI: Yes, on the 11th, to the police
15 report, I think. So the two -- I just said on the 13th I
16 measured a two-microliter probe solution, is two
17 microliters I took August --

18 INTERVIEWER SHERBINI: Let's go back to August
19 11th.

20 DR. LI: Yes, August 11th.

21 INTERVIEWER SHERBINI: Now, when did you first
22 start doing the labeling? Was that August 11th? You did
23 the first -- you said you did the nick translation on
24 August 11th.

25 DR. LI: Yes, yes. Nick -- on August the 11th

1 I did a random primer labeling, PCR labeling, and nick
2 translation because I wanted to find out which one will
3 work.

4 INTERVIEWER SHERBINI: Okay.

5 DR. LI: So according to the paper I gave to
6 the police report, I think I should have used a lot on
7 11th. How much I used? Yes. On 11th I used for three
8 reaction, you see, 15 microcuries.

9 INTERVIEWER SHERBINI: For each action?

10 DR. LI: For two action and 63 microcuries for
11 another reaction. So it should be three independent
12 reaction using three independent methods. So on August
13 11th I was trying to determine which method will work.

14 INTERVIEWER SHERBINI: So on August 11th you
15 used about 110 microcuries altogether?

16 DR. LI: A hundred --

17 INTERVIEWER ROBINSON: Sixty-three.

18 DR. LI: A hundred sixty-three microcuries,
19 yes.

20 INTERVIEWER SHERBINI: How does that? There
21 was two --

22 DR. LI: It's 50 times two.

23 INTERVIEWER SHERBINI: Fifty for two?

24 DR. LI: Yes. And it's 100.

25 INTERVIEWER SHERBINI: And that's 100.

1 DR. LI: And then 63.

2 INTERVIEWER SHERBINI: And 63 micro for the
3 third.

4 DR. LI: Yes.

5 INTERVIEWER SHERBINI: So you used two vials,
6 one vial plus --

7 DR. LI: Three vials, three different reaction
8 tubes.

9 INTERVIEWER SHERBINI: I guess what I'm trying
10 to understand is when you get the P-32 from the high
11 specific activity vials, you put them in a solution that
12 dilutes it considerably.

13 DR. LI: No, no. Usually we -- when I do that
14 radioisotope experiment, what I do usually is I put on
15 gloves first, disposable plastic gloves or latex gloves,
16 rubber latex gloves.

17 And then I open the freezer and take out the
18 vial, radioisotope vial. It's a very concentrated form.
19 At most you have 110 or 120 microliter in there, which is
20 equivalent to 1.2 millicuries maybe. And I put in the back
21 of this shield.

22 INTERVIEWER SHERBINI: Right.

23 DR. LI: We have a plexiglass shield.

24 INTERVIEWER SHERBINI: Yes.

25 DR. LI: And at room temperature let them to

1 dissolve depending on the time. If I want to speed it up,
2 I would put this vial in 37 autobus, which is immediately
3 next to my bench, and let them dissolve so that I can take
4 out.

5 So while the isotope is thawing, is turning to
6 water solution, I usually will assemble a reaction mix.
7 Reaction mix usually involves DNA you want to label and
8 then the chemicals and then the substrates, et cetera,
9 water to assemble into a reaction.

10 When this reaction is assembled, before adding
11 the enzyme, in order to catalyze on the reaction, you have
12 to add the enzyme and start that. So before I add the
13 enzyme, usually I add the isotope.

14 INTERVIEWER SHERBINI: To the reaction?

15 DR. LI: Sorry. Depending on what type of
16 reaction we're talking about, if it's random primer
17 reaction, I have to denature the DNA first before adding
18 the isotope. So to denature the DNA, I usually heat them
19 at 95 degrees for 5 minutes. This is done in a PCR
20 machine.

21 We have a temperature program. You put the
22 tube in program for 5 minutes at 95 degrees, you denature
23 that. And then you quickly take them up, put them in the
24 ice. And then after it's cool, you have condensation on
25 the tube's top. You spin them down. So condensate

1 changes. And then you add the radioisotope or the
2 complement. So this is for random primer labeling.

3 For nick translation you don't have to do that.

4 INTERVIEWER SHERBINI: Before we go further,
5 when you add the isotope to that mix, does the
6 concentration change then or is it still --

7 DR. LI: When I take the isotope out, it's
8 still concentrated form.

9 INTERVIEWER SHERBINI: Correct. But when you
10 add it.

11 DR. LI: When I add it, I lose that, yes.

12 INTERVIEWER SHERBINI: How much concentration
13 would you say roughly?

14 DR. LI: Roughly will be fivefold to tenfold
15 dilution.

16 INTERVIEWER SHERBINI: Dilution. Okay.

17 DR. LI: Yes.

18 INTERVIEWER SHERBINI: All right. Okay. And
19 the other two labeling methods are similar?

20 DR. LI: Yes, similar, similar. For the PCR
21 labeling, the difference is you set -- for PCR labeling,
22 you don't have two steps. You don't heat the DNA template.
23 You add everything together, and then you put into a PCR
24 machine and start labeling.

25 For the nick translation, you also don't use

1 the heat denature. You assemble everything together, and
2 then you put that into a water bath and start reaction.

3 INTERVIEWER SHERBINI: And it shouldn't be --

4 DR. LI: Approximately the same. It's five to
5 tenfold dilution, yes.

6 So for all the three method when you finish
7 the level, which depends on the method we use, it's somehow
8 between one to three hours. Then what I usually do is heat
9 the solution to reactivate the enzyme and then put in the
10 -- put on top of the ice to cool the solution down and then
11 add some sperm DNA. It's a DNA prepared from the fish.
12 And this is a carrier DNA to bring down the probe.

13 And then I add spermidine to bring down the
14 DNA. And then I centrifuge the solution down. Then I use
15 a pipette to take out supernatant to another tube, clean
16 tube. And then I -- before I close that clean tube, I
17 usually take out 2 lambda, out of 200 approximately, of
18 supernatant.

19 INTERVIEWER SHERBINI: Okay.

20 DR. LI: And that two lambda will determine the
21 incooperation efficiency later for me. So that's why on
22 August 13th I have these two lambda, yes.

23 INTERVIEWER SHERBINI: Okay. These are the two
24 lambda that you had from August 11th that you took out on
25 August 11th?

1 DR. LI: Yes, yes, I believe so. And on the
2 pellet, when you remove the supernatant from the tube, you
3 have a DNA pellet in there. So pellet is dissolved by
4 approximately 200-microliter level, another solution. And
5 when I dissolve this, I also take out two lambda for the
6 probe.

7 INTERVIEWER SHERBINI: Would most of the P-32
8 be in there?

9 DR. LI: Depending on whether your labeling is
10 good or not.

11 INTERVIEWER SHERBINI: Yes. Okay. If it is
12 good, it would be there; right?

13 DR. LI: If it's good, about 50 to 80 percent
14 will be in the probe part. If it's fair, it's only 10 to
15 20 percent in that. Yes.

16 INTERVIEWER SHERBINI: Okay. And on the 13th
17 you did the same thing? You did labeling?

18 DR. LI: No. On the 13th I didn't do the
19 labeling because I only measure the two lambda left I took
20 on 11th. And I wanted to check which one worked; in other
21 words, how many radioactivity incorporated into that probe.

22 So the notebook showed me that for the nick
23 translation, I failed. I only got 6,000 into the probe,
24 into 2-lambda probe. For the PCR method I got 68,000.
25 It's two times better than nick translation. For the

1 random primer method I got even better. I got 138,000 into
2 that. So this side is a total translation of the probe, so
3 when you calibrate into the whole probe how much I have.

4 So the first method I got one milli. Second
5 method I got 10.3 milli. And the third one I got 21 milli
6 of probe. Milli means count, cpm.

7 INTERVIEWER SHERBINI: Okay. I guess that
8 should cover it. So basically once you add the P-32 from
9 the vial to the labeling solution, then it's in quite
10 dilute form?

11 DR. LI: Yes, quite right.

12 INTERVIEWER SHERBINI: And it stays that way?
13 It doesn't get reconcentrated again?

14 DR. LI: No, no. It becomes even diluted when
15 I go down and process. Yes.

16 INTERVIEWER SHERBINI: That's all I had.

17 INTERVIEWER ROBINSON: And once you read the
18 results there on Sunday, --

19 DR. LI: Yes. Sunday, yes.

20 INTERVIEWER ROBINSON: -- what did you do with
21 the elements that were --

22 DR. LI: Radioisotope, you mean?

23 INTERVIEWER ROBINSON: Yes.

24 DR. LI: Yes. Usually I throw them into a
25 trash can that is specifically designed for radio waste,

1 radioactivity waste.

2 INTERVIEWER ROBINSON: And in doing that
3 particular reading of the results, do you also wear gloves
4 or is that --

5 DR. LI: Definitely, definitely.

6 INTERVIEWER ROBINSON: Okay. So that --

7 DR. LI: Everything when you handle isotope,
8 you wear gloves. And after you finish all these things,
9 you check with Geiger counter.

10 INTERVIEWER ROBINSON: So do you recall or do
11 you know that you surveyed yourself on the 14th, --

12 DR. LI: Oh, yes, definitely.

13 INTERVIEWER ROBINSON: -- before you left?

14 DR. LI: Definitely, definitely. Yes,
15 definitely.

16 INTERVIEWER ROBINSON: And nothing unusual?

17 DR. LI: No because this is like a habit.

18 INTERVIEWER ROBINSON: Yes, sure.

19 DR. LI: You don't forget about it. And you
20 don't have to take a brain to do that. It's not.
21 Methodically you do that. That's why I could detect it on
22 19th when I came back and I checked it and it's --

23 INTERVIEWER ROBINSON: Okay. And there was
24 nothing unusual on Sunday, the 13th?

25 DR. LI: No.

1 INTERVIEWER SHERBINI: I have one question,
2 maybe not directly related to this.

3 DR. LI: Yes, yes

4 INTERVIEWER SHERBINI: When you dispose of the
5 waste, how do you determine how much waste, how much
6 activity you are putting into waste?

7 DR. LI: Actually, we never determine that. We
8 --

9 INTERVIEWER SHERBINI: You don't have to record
10 how much you put into the waste baskets?

11 DR. LI: Theoretically we have to record.

12 INTERVIEWER SHERBINI: But you don't? No,
13 nobody does?

14 DR. LI: Nobody does. I mean, we just don't
15 want to do that.

16 INTERVIEWER SHERBINI: Because it's difficult
17 to do it?

18 DR. LI: No, not difficult to do it. We just
19 want to concentrate on science.

20 INTERVIEWER SHERBINI: Yes. Okay.

21 DR. LI: I know it's not good, but we know we
22 didn't put them into radio trash, right. And we just know
23 it's not a big deal. It's 10.3 milli is 5 microcurie.

24 INTERVIEWER SHERBINI: Well, whatever you take
25 out of the vial has to either decay or end up in the trash;

1 right, or in the sink?

2 DR. LI: For me I have a trash glass bottle,
3 which is filled with plastic bag, something like that. So
4 I usually deposit those first into that glass bottle. And
5 then after maybe a week or two or three weeks, I will take
6 that plastic bag out and dispose them into the trash.

7 INTERVIEWER SHERBINI: So you dispose of trash
8 only once every two or three weeks?

9 DR. LI: Yes, into the radioactive trash.

10 INTERVIEWER SHERBINI: Right. In the meantime
11 where does this plastic bag sit? Where would it sit?

12 DR. LI: It's inside a glass container.

13 INTERVIEWER SHERBINI: On your work bench?

14 DR. LI: On my work bench, yes. And since it's
15 not a big activity, it's not a high activity, like two
16 lambda is one milli or something, so inside that glass is
17 pretty small.

18 INTERVIEWER SHERBINI: Well, if you have taken,
19 say, 160 microcuries on 11th, say.

20 DR. LI: Oh, no. Oh, no, no. That type of
21 thing is different. You mean the whole probe solution?

22 INTERVIEWER SHERBINI: Yes.

23 DR. LI: Whole probe solution is disposed to
24 the hood. So after you mix with the -- mix with high
25 dilution solution, then you get about 10 milliliters. So

1 10 milliliters after you finish high dilation initially
2 slow them. We have a hood where we have a container to
3 those solution.

4 What I was telling you is about these two
5 lambda. Two lambda is small amount. So this glass bottle
6 only contains like two lambda out of this and also the tip.
7 I use when I pipe it out, have to change the tip. Those
8 tips are also in there.

9 So it's a quite low level of activity, and I
10 dispose them like once a week or once two weeks, depending
11 on my frequency of filling up on those things.

12 INTERVIEWER SHERBINI: But the hood is for the
13 liquid wastes?

14 DR. LI: Yes, hood is for the liquid wastes.

15 INTERVIEWER SHERBINI: And it goes what, into a
16 plastic container or something?

17 DR. LI: Yes, it's a plastic container. Yes.

18 INTERVIEWER SHERBINI: And then the --

19 DR. LI: I have several bottles there, P-32,
20 tritium, all those things, yes.

21 INTERVIEWER SHERBINI: And then do you have to
22 record how much you put into these baskets also or buckets?

23 DR. LI: Yes, we have to record that. But
24 usually I don't think a lot of people do it.

25 INTERVIEWER SHERBINI: What do you record or

1 what do people usually record, what they take out of the
2 refrigerator? Is that the thing that's usually recorded?

3 DR. LI: Yes. When I was in Japan and China,
4 we had to do it strictly. When I used 10 microliter, I
5 write down "10 microliter."

6 INTERVIEWER SHERBINI: From the refrigerator?

7 DR. LI: From the refrigerator. Then the
8 people can trace down actually how much in your vial. But
9 here we never had such system in U.S.

10 INTERVIEWER SHERBINI: What system is here?

11 DR. LI: We just --

12 INTERVIEWER SHERBINI: Just take it out?

13 DR. LI: -- take out and return back.

14 INTERVIEWER SHERBINI: So you don't really know
15 at one time how much you have left in the refrigerator or
16 you don't actually --

17 DR. LI: No, we don't know. We have no idea.
18 We actually don't care.

19 INTERVIEWER SHERBINI: I was wondering if there
20 is enough there.

21 DR. LI: If there is not enough, we just
22 complain to the lab manager, lab manager or the boss or --

23 INTERVIEWER SHERBINI: Do the vials belong to
24 people? Like do you have your own vials in the
25 refrigerator?

1 DR. LI: No, no, no. It's for the whole lab.

2 INTERVIEWER SHERBINI: It's for the whole lab.

3 DR. LI: You are not supposed to put the
4 radioisotope vial in your own refrigerator, freezer space.
5 It's not ethical. You're causing trouble for other people.
6 Other people might search for it.

7 INTERVIEWER SHERBINI: So there is a common
8 area where everybody takes their radioactive material?

9 DR. LI: Yes. It's not a common area
10 specifically. It's a freezer, -20 degree freezer. And it
11 has 40 or maybe 100 vials in there.

12 INTERVIEWER SHERBINI: And that's kept stocked
13 with vials? So every time it gets empty, somebody -- do
14 you order your material or does the lab manager or --

15 DR. LI: Lab manager. We have a -- I think we
16 call it a standing order. Standing order mean we have
17 maybe a contract with the company. So every week they give
18 us A type of vial.

19 INTERVIEWER SHERBINI: I see.

20 DR. LI: And every other week they give us
21 another B type of vial. So we automatically get every week
22 that.

23 INTERVIEWER SHERBINI: I see.

24 DR. LI: In addition to that, if you feel
25 you're short of supply, then you can write on order book to

1 order one millicurie or two millicurie, stuff like that.

2 INTERVIEWER SHERBINI: Okay.

3 INTERVIEWER ROBINSON: And I probably missed
4 that, but in the disposal, in the hood area, did you say
5 that that disposal area was a kind of a common area or was
6 that just at your desk, the disposal?

7 DR. LI: No. It's a common area. It's a
8 chemical hood. And that's air sucks in, and you have to
9 open a hood a little bit and --

10 INTERVIEWER ROBINSON: And everybody puts their
11 disposal in there or two or three or four people?

12 DR. LI: I don't know because I only account
13 for my behavior. I cannot say what other people --

14 INTERVIEWER ROBINSON: Oh, yes. Okay.

15 INTERVIEWER SHERBINI: But this is not your
16 hood? This is --

17 DR. LI: This is the lab's hood.

18 INTERVIEWER ROBINSON: Okay.

19 INTERVIEWER SHERBINI: I don't have any more
20 questions.

21 INTERVIEWER ROBINSON: Okay.

22 DR. LI: Okay. So I have to make the
23 corrections. I had a little bit, but it's a very low
24 level. It's only one percent of usually I use.

25 INTERVIEWER ROBINSON: Well, that's good. And

1 that's good to know that. And it's good to know that you
2 surveyed yourself on the 13th and did not find any unusual
3 level of the radioactivity.

4 DR. LI: No, no.

5 INTERVIEWER ROBINSON: Okay.

6 DR. LI: So looking at the notebook, so I went
7 to the library to improve the PCR labeling. So I did a
8 literature research. I found the three papers here.

9 INTERVIEWER ROBINSON: Yes. I'm trying to find
10 that particular -- in the copies of the documents that you
11 gave us, I want to make sure that I have that.

12 DR. LI: Yes. You have it. Yesterday I
13 verified that.

14 INTERVIEWER ROBINSON: Okay.

15 DR. LI: No, it's not in there, not in this.

16 INTERVIEWER ROBINSON: Okay. Let the record
17 reflect that this is Item Number 10-95-14T, the notebook of
18 Dr. Li, the notebook entry.

19 All right. Let's go to August 14th, Monday,
20 August 14th. Is there anything else that happened on the
21 13th that we didn't talk about that you think might be
22 important to help me find this person? Anything unusual
23 happen to you in the lab on the 13th? Any strangers
24 walking through the lab?

25 DR. LI: No, no.

1 INTERVIEWER ROBINSON: Okay. Let's go to the
2 14th.

3 DR. LI: Yes.

4 INTERVIEWER ROBINSON: The 14th is a Monday.
5 So you are in more of a week-type routine. There are
6 probably more people in the lab on Monday?

7 DR. LI: Yes.

8 INTERVIEWER ROBINSON: Okay. Let's start from
9 the beginning. Did you take your car to work or did you
10 take the train?

11 DR. LI: I took the train.

12 INTERVIEWER ROBINSON: And you arrived at work
13 at what time?

14 DR. LI: 8:10.

15 INTERVIEWER ROBINSON: 8:10. Okay.

16 DR. LI: Yes. This is looking at --

17 INTERVIEWER ROBINSON: And I understand on that
18 time you knew that you had left a meal in the refrigerator?

19 DR. LI: Yes.

20 INTERVIEWER ROBINSON: So you just brought one
21 meal?

22 DR. LI: Yes.

23 INTERVIEWER ROBINSON: And did that meal have
24 fruit in it?

25 DR. LI: I don't know. I can't remember.

1 INTERVIEWER ROBINSON: So that meal you
2 probably or you did separately wrap up in that plastic
3 grocery bag and --

4 DR. LI: Yes. Different bags, yes.

5 INTERVIEWER ROBINSON: So when you put that one
6 in the refrigerator, there were now two plastic grocery
7 bags with your meal in it?

8 DR. LI: Yes.

9 INTERVIEWER ROBINSON: And both of the
10 Tupperware containers are kind of unique. Nobody else in
11 the lab has those kind of Tupperware containers?

12 DR. LI: No, no.

13 INTERVIEWER ROBINSON: Is that food
14 refrigerator pretty crowded with people bringing in their
15 food?

16 DR. LI: Yes, it's pretty crowded.

17 INTERVIEWER ROBINSON: Pretty crowded?

18 DR. LI: Yes.

19 INTERVIEWER ROBINSON: A lot of people bring in
20 their food?

21 DR. LI: Yes.

22 INTERVIEWER ROBINSON: Do other people wrap
23 their food in plastic bags, grocery bags, like that?

24 DR. LI: Yes, yes, yes.

25 INTERVIEWER ROBINSON: They do?

1 DR. LI: Most of the people, I think.

2 INTERVIEWER ROBINSON: So if some stranger were
3 to open that refrigerator, he would see a lot of plastic
4 grocery bags?

5 DR. LI: Yes.

6 INTERVIEWER ROBINSON: And if he wanted to
7 identify your lunch, he would have to open that bag and
8 notice your Tupperware container, kind of your unique
9 Tupperware container?

10 DR. LI: Yes, yes. Otherwise he or she cannot
11 count. Yes, you have to open the bag. Yes.

12 INTERVIEWER ROBINSON: And, to your knowledge,
13 was there any kind of survey or analysis done on the water
14 cooler at any time?

15 DR. LI: On that day?

16 INTERVIEWER ROBINSON: No, not necessarily on
17 that day. At any time.

18 DR. LI: No.

19 INTERVIEWER ROBINSON: No?

20 DR. LI: Using the Geiger counter?

21 INTERVIEWER ROBINSON: Well, any kind of level
22 analysis that you know of. Has anybody done any analysis
23 of the water in that water cooler?

24 DR. LI: Yes. I think Mitch Galanek surveyed
25 the water cooler August 1971.

1 INTERVIEWER ROBINSON: Nineteenth?

2 DR. LI: Yes.

3 INTERVIEWER ROBINSON: The day --

4 DR. LI: I discovered it, yes.

5 INTERVIEWER ROBINSON: Okay. Okay.

6 INTERVIEWER SHERBINI: Let me ask a question.

7 INTERVIEWER ROBINSON: Was that an external
8 type survey? What did he use for that survey?

9 DR. LI: He used a Geiger counter, just quickly
10 survey the sink. We have a small sink immediately beyond
11 the tap outlet. So I think he surveyed that and also
12 surveyed the big water tank up at that, up at the water
13 cooler, yes.

14 INTERVIEWER ROBINSON: Do you remember if he
15 poured any water out of the water cooler?

16 DR. LI: No, no, he didn't.

17 INTERVIEWER ROBINSON: He did not do that?

18 DR. LI: No, he didn't do that.

19 INTERVIEWER ROBINSON: Okay. Your question?

20 INTERVIEWER SHERBINI: Just a quick question.

21 Going back to the Tupperware food container, how would
22 somebody know that it's yours and not somebody else? Do
23 you have your name on it or something?

24 DR. LI: No, no. Because I use a kind of a
25 round box. Only me used it.

1 INTERVIEWER SHERBINI: Oh, nobody else has this
2 kind of --

3 DR. LI: They have this type of box, but it's
4 different shape, different brand.

5 INTERVIEWER SHERBINI: Somebody has to know
6 that you use this kind of, this brand of Tupperware?

7 DR. LI: Yes, yes. I only have two type of
8 Tupperware. One is flat, a big one, six-cup one. Another
9 one is four-cup one.

10 INTERVIEWER SHERBINI: And nobody else has this
11 kind?

12 DR. LI: No, no. They have, but it's different
13 size or different shape.

14 INTERVIEWER ROBINSON: And different color,
15 too, isn't it?

16 DR. LI: Probably different color, yes. Maybe
17 the blue color or something, but it's distinctive.

18 INTERVIEWER ROBINSON: You have arrived at work
19 on Monday, the 14th?

20 DR. LI: Yes.

21 INTERVIEWER ROBINSON: Kind of describe to the
22 best of your memory what you did.

23 DR. LI: Okay.

24 INTERVIEWER ROBINSON: Did you immediately
25 check your mailbox and the fax?

1 DR. LI: Yes. So I came into the lab. I open
2 the door. And I usually unlock the door because I usually
3 am the first person. At 8:10 it's pretty early because our
4 lab usually starts work much later, like 9:00 or 10:00
5 o'clock. So I'm going into the early bird type.

6 I usually open the door, unlock the door so
7 that the next person coming in don't have to open it again.

8 INTERVIEWER ROBINSON: Do you remember on the
9 14th that you did have to unlock the door?

10 DR. LI: I believe I unlocked the door because
11 it's a kind of thing I do 80 or 90 percent of the time I
12 come in.

13 INTERVIEWER ROBINSON: You're usually the first
14 one in?

15 DR. LI: Yes, I'm usually the first one in.
16 And usually it's like habit. I do it unconsciously
17 sometime even.

18 And then I usually check the fax machine, see
19 when I have fax, and then check my mailbox, see whether I
20 have a fax received over the night. And then I open up my
21 pack, and I put the one box of food in there.

22 INTERVIEWER ROBINSON: Okay.

23 DR. LI: And then I immediately go to my desk.
24 On top of my desk I have a terminal, VT300 terminal, 330
25 terminal. It's a DEC terminal, DEC computer terminal.

1 INTERVIEWER ROBINSON: Computer terminal.

2 Okay.

3 DR. LI: It's connected to a host computer
4 through the cable. I usually turn on the computer and log
5 into my WCCF account. WCCF is the host computer. And I
6 want to check. When you open your account, you can check
7 on whether you have E-mails or not.

8 And then if I have E-mail -- I can't remember
9 exactly. I have to look at my E-mails whether I received
10 E-mail that day or not. Even then I might have deleted an
11 E-mail. I might have deleted E-mail already. So it's
12 difficult to trace that.

13 Then I usually turn off the computer. Then I
14 usually take out a floppy disk.

15 INTERVIEWER ROBINSON: Excuse me?

16 DR. LI: Take out a floppy disk.

17 INTERVIEWER ROBINSON: Okay.

18 DR. LI: Floppy disk.

19 INTERVIEWER ROBINSON: Floppy disk.

20 DR. LI: These floppy disk contain all the log
21 data I have like this. So I will usually go to the
22 computer room and put my floppy disk in and type in the
23 time I arrive and the time I left the lab yesterday and
24 calculate how much hours I spend yesterday.

25 INTERVIEWER ROBINSON: And you don't do that on

1 the terminal that you first go to?

2 DR. LI: No. That does not have a good word
3 processing software. It's mainly for Internet access.

4 INTERVIEWER ROBINSON: And you have to have an
5 individual account to get to the Internet access; right?

6 DR. LI: Sure, yes.

7 INTERVIEWER ROBINSON: So you've got an
8 individual account?

9 DR. LI: Yes.

10 INTERVIEWER ROBINSON: I understand that to use
11 the -- when you go into the other area to put your floppy
12 disk in and enter the time of the day, to use those
13 computers, you don't have to have an individual account.
14 The other researchers don't necessarily have to have an
15 individual account; right?

16 DR. LI: No. It's not protected. Everyone can
17 use that. That's why I use the floppy disk. I never put
18 this kind of file in the hard disk.

19 INTERVIEWER ROBINSON: Do you keep that floppy
20 disk at work or do you take it home with you?

21 DR. LI: It's always in my bag.

22 INTERVIEWER ROBINSON: Go ahead.

23 DR. LI: So I might not usually reflect on what
24 I did yesterday and type in what I did yesterday. And then
25 I will think -- while doing that, I will think about what I

1 should do today. So that's a kind of habit I calculated
2 over a long period of --

3 INTERVIEWER ROBINSON: Good habit.

4 DR. LI: So then I started working. I started
5 working doing research.

6 INTERVIEWER ROBINSON: Okay.

7 DR. LI: So I first come into this, come into
8 the notebook. I first did experiment to test probe
9 labeling conditions. So I assembled this reaction here.
10 this is PCR labeling reaction. So I didn't write when it's
11 started, but I think it should start -- it should start
12 approximately around 9:00 o'clock the reaction started.

13 INTERVIEWER ROBINSON: Okay.

14 DR. LI: And it takes about two and a half
15 hours to finish this reaction.

16 INTERVIEWER ROBINSON: Did you have to draw new
17 isotope to start that experiment?

18 DR. LI: Yes, yes. I used -- as I write here,
19 it's --

20 INTERVIEWER ROBINSON: Two lambda?

21 DR. LI: It's five lambda.

22 INTERVIEWER ROBINSON: Okay.

23 DR. LI: Five lambda DCTP P-32, 300 curie per
24 millimole.

25 INTERVIEWER ROBINSON: So after you made your

1 entries on your floppy disk, you went and drew some isotope
2 and then started to do your experiment?

3 DR. LI: To do that experiment, yes. And the
4 reaction should end around 11:00 o'clock or 11:30. And
5 then, as usual, I precipitate down the DNA. And then I
6 measured separately some precipitate and a supernatant to
7 find out what's the fraction incorporated into the DNA,
8 which is written down there. Okay?

9 INTERVIEWER ROBINSON: Okay. All right.

10 DR. LI: In the pellet it's only two to three
11 milli, two to three milli of counts. But in a supernatant,
12 when I use Taq polymerase, Taq polymerase, I got 118 milli
13 in the pellet -- or in the supernatant. I'm sorry.

14 In another vial, when I used the Taq, another
15 end of it -- it's called the TaqEx. It has X nucleus
16 activity. It's 178 millicurie. So both of them failed to
17 incorporate the significant amount of activity into the DNA
18 probe.

19 INTERVIEWER ROBINSON: About how long did this
20 process take?

21 DR. LI: It's about three hours, I would say.

22 INTERVIEWER ROBINSON: Okay. And do you have
23 to observe the process? What were you doing while that
24 process was going on?

25 DR. LI: Okay. So for the first 30 minutes or

1 maybe 45 minutes I have to assemble this reaction, take out
2 all the individual vials from the freezer or from -- either
3 it's radioactive or it's normal -- and just let them
4 dissolve or thaw.

5 And then I just take out individual complement
6 as needed according to this cocktail and assemble them
7 together and then put them into the machine. This process
8 takes about 45 minutes. And then the machine will run that
9 automatically for you. So I believe this will take about
10 three hours.

11 INTERVIEWER ROBINSON: And you started at about
12 9:00 o'clock?

13 DR. LI: 9:00 o'clock, yes. It's probably more
14 than 3 hours because I used 72 degrees for one minute and
15 30 seconds. So maybe it's three and a half, three and a
16 half. So if that's the case, probably the reaction will
17 end at 1:00 o'clock. Yes, you're right.

18 INTERVIEWER ROBINSON: Before or while that
19 process was going on, do you remember eating or drinking
20 anything?

21 DR. LI: I think looking from this time table,
22 I realize I probably ate my lunch at 12:00 o'clock because
23 if you calculate here, if I started working at, let's say,
24 8:45, it takes about 45 minutes to assemble the reaction.
25 So the reaction should start around 12:00 -- 9:30.

1 INTERVIEWER ROBINSON: 9:30.

2 DR. LI: Plus/minus maybe 30 minutes. And then
3 it takes about three and a half hour, maybe three hour to
4 three and a half hour, to finish this PCR process. So that
5 will stretch into 12:00 to 1:00. It will finish at 12:00
6 to 1:00 o'clock.

7 And if I finish that reaction, usually I have
8 to take them out and do the precipitation. That's another
9 hour or 30 minutes to an hour to finish the precipitation,
10 separation process. So that will be very difficult for me
11 to have lunch.

12 INTERVIEWER ROBINSON: But you don't have to
13 observe that process, do you?

14 DR. LI: No. It's automatic, fully automatic.

15 INTERVIEWER ROBINSON: So my question is:
16 Before you had lunch, during that three and a half-hour
17 period, do you recall whether you had a drink of water or a
18 snack?

19 DR. LI: Oh, no.

20 INTERVIEWER ROBINSON: Do you ever go get a
21 snack or --

22 DR. LI: I'm 100 percent sure I didn't have a
23 snack. I never have a habit of eating during the morning
24 for snack.

25 INTERVIEWER ROBINSON: Okay.

1 DR. LI: Water I'm not sure of. I might drink
2 once, but it's not a -- it's not recorded. So I don't know
3 whether I do.

4 INTERVIEWER ROBINSON: Yes. You do good
5 recording, but I don't expect you to record every time you
6 take a drink of water.

7 DR. LI: Okay.

8 INTERVIEWER ROBINSON: Are there paper cups
9 with --

10 DR. LI: I use coffee mug.

11 INTERVIEWER ROBINSON: You use your coffee mug
12 when you get water?

13 DR. LI: Yes. Get water, yes.

14 INTERVIEWER ROBINSON: Okay. All right. Go
15 ahead. The experiment is now over. Okay.

16 DR. LI: So the experiment, so this first batch
17 of experiment should be over around 2:00 o'clock, 1:00 to
18 2:00 o'clock, because I have to get these counts and get
19 this down. This is about 2:00 o'clock, I believe.

20 INTERVIEWER ROBINSON: So you have already
21 eaten your lunch?

22 DR. LI: Yes.

23 INTERVIEWER ROBINSON: You have eaten your
24 lunch before that?

25 DR. LI: I think probably it's 12:00 o'clock to

1 12:30 I had my lunch, yes.

2 INTERVIEWER ROBINSON: And where did you eat
3 it?

4 DR. LI: In the conference room, in the third
5 floor conference room.

6 INTERVIEWER ROBINSON: And your wife is not
7 here on Monday?

8 DR. LI: She was working.

9 INTERVIEWER ROBINSON: She works at Harvard?

10 DR. LI: No. She works in GTE Government
11 System.

12 INTERVIEWER ROBINSON: Oh, I see.

13 DR. LI: It's part of a GTE company. They do
14 software there.

15 INTERVIEWER ROBINSON: Okay. And which of the
16 meals did you eat for lunch?

17 DR. LI: The one I brought in Sunday. That I'm
18 100 percent sure because that lunch was left overnight.
19 And that one was cooked maybe four or five days ago. So I
20 have to finish that first. Otherwise it might deteriorate.
21 So that's for sure, yes.

22 INTERVIEWER ROBINSON: Okay.

23 INTERVIEWER SHERBINI: I have a question.

24 DR. LI: Yes.

25 INTERVIEWER SHERBINI: When you come into the

1 building, do you have to use your key also?

2 DR. LI: Yes. During workdays, the building is
3 open. You don't need a key to go into the building.

4 INTERVIEWER SHERBINI: But on Sunday?

5 DR. LI: On Sunday the building is locked. But
6 we have a small door. It is not locked on the back.

7 INTERVIEWER SHERBINI: I see.

8 DR. LI: So usually people always go through
9 that door. It's basically unlocked. You can have access
10 to everything if you know how to get in. You don't need a
11 key.

12 INTERVIEWER ROBINSON: Do you remember on
13 Sunday when you came in at 10:00 o'clock if you had to
14 unlock the lab door?

15 DR. LI: Yes.

16 INTERVIEWER ROBINSON: You did?

17 DR. LI: Yes.

18 INTERVIEWER ROBINSON: So there was nobody else
19 in the lab on Sunday when you first came in?

20 DR. LI: No. I'm not quite sure, but I
21 remembered I opened the door at 10:00 o'clock, yes because,
22 after all, it was usually opened -- or usually locked on
23 weekend because on weekend people start much later. And at
24 10:00 o'clock it is probably still pretty early.

25 So there might be a few people working in the

1 lab, but on weekend that door is usually opened -- closed.
2 Sorry.

3 INTERVIEWER ROBINSON: Back to Monday now,
4 after you ate your lunch on Monday -- what do you do with
5 your Tupperware container and your plastic bag when you
6 finish your lunch?

7 DR. LI: Okay. When I finish my lunch, I
8 usually wash them at the sink, the sink, a small sink like
9 in the wall near the conference room. I wash them and then
10 wrap them into the plastic bag.

11 INTERVIEWER ROBINSON: So you reuse the plastic
12 bag?

13 DR. LI: Sure, yes. Wrap them in plastic bag
14 and then put them back into my bag.

15 INTERVIEWER ROBINSON: A backpack-type bag or
16 what kind of bag?

17 DR. LI: No. It's a bag like that, yes, that
18 type of bag.

19 INTERVIEWER ROBINSON: Like a computer carrier
20 type of bag?

21 DR. LI: Yes, yes.

22 INTERVIEWER ROBINSON: Okay. Okay. All right.
23 So you have eaten your lunch and you have washed out your
24 Tupperware container and put it back in its bag and put it
25 into your bag?

1 DR. LI: Yes.

2 INTERVIEWER ROBINSON: But now you still have a
3 meal in there in your Tupperware in another plastic bag?

4 DR. LI: Yes, in another plastic bag in the
5 refrigerator.

6 INTERVIEWER ROBINSON: Now we come to the end
7 of this experiment, which you said would have been around
8 2:00 or 2:30.

9 DR. LI: 2:00 o'clock probably, around 2:00
10 o'clock, I think I reached this step.

11 INTERVIEWER ROBINSON: Did you have to dispose
12 of some waste from that experiment?

13 DR. LI: Yes. I have to dispose of supernatant
14 because it's almost 15 microcuries in there because
15 reaction almost failed.

16 INTERVIEWER ROBINSON: So this goes into the
17 hood-type disposal?

18 DR. LI: No, no. It's a very small tube, a
19 tube with only 200 microliter in it. So it's closed. So
20 usually I dispose them into the -- we have a long
21 radioactive trash container in my room. Yes.

22 INTERVIEWER ROBINSON: So that's a different
23 disposal area that -- we haven't talked about that yet,
24 have we?

25 DR. LI: No, no. It's a new --

1 INTERVIEWER ROBINSON: Different disposal area?

2 DR. LI: Yes.

3 INTERVIEWER SHERBINI: This is a third area?

4 We talked about the --

5 INTERVIEWER ROBINSON: Well, we talked about
6 the individual thing on your --

7 DR. LI: Trash can, yes. This is a common
8 trash place. it's a long, big, long --

9 INTERVIEWER SHERBINI: Yes. I saw that, yes.

10 DR. LI: So usually I dispose that type of
11 thing in there. Yes.

12 INTERVIEWER SHERBINI: Okay. Fine.

13 INTERVIEWER ROBINSON: Okay. And in the
14 disposal of this, I mean, are you wearing the gloves and --

15 DR. LI: Of course, yes.

16 INTERVIEWER ROBINSON: Same precautions?

17 DR. LI: Yes, sure.

18 INTERVIEWER ROBINSON: And you disposed of it
19 and then did you survey yourself at that time?

20 DR. LI: Depending on what thing I did next.

21 Let me see. Let me read next sheet. Yes. No, I don't
22 think I surveyed after that time because immediately I did
23 a reaction again. I needed a glass to do the reaction.

24 So I have a habit when I take off gloves, --

25 INTERVIEWER ROBINSON: Then you survey.

1 DR. LI: -- then I survey because it's
2 important for me to survey. If it's not hot or not
3 radioactive, it goes into trash, regular trash. If it's
4 radioactive, it goes into radioactive trash can.

5 INTERVIEWER ROBINSON: The gloves?

6 DR. LI: Yes, gloves. It's a different
7 procedure. That's why it's important. Every time I take a
8 glove, I always survey my hand.

9 INTERVIEWER ROBINSON: So you were able to keep
10 your gloves on for the next experiment?

11 DR. LI: Experiment. Probably I surveyed it,
12 but I'm not 100 percent sure because why I think I might
13 survey it, because when I have to light here, I have to
14 light cocktail again, light. So this is mixed.

15 But usually if I have a counter near me, I will
16 survey before I touch my pen or my pencil to light here.
17 If it's contaminated on the glove, I might contaminate the
18 pencil. Then I bring to over my clothes and everywhere.
19 So I'm not 100 percent sure whether I surveyed or not.
20 Probably it's surveyed or half/half. It's half/half. Yes.

21 So I assembled this reaction, two reactions,
22 again.

23 INTERVIEWER ROBINSON: One question before
24 that.

25 DR. LI: Yes.

1 INTERVIEWER ROBINSON: At the beginning of the
2 day, when you are going to the freezer and drawing the
3 isotope for your experiments that day, do you draw it all
4 at that time and let it thaw or do you just draw enough for
5 one experiment and then go back?

6 DR. LI: Yes. I always just draw for one
7 experiment. It's not -- and I said it's not ethical to
8 draw enough to draw your portion before your use because in
9 between someone else might use it. So it's not good. It's
10 not an acceptable practice. So whenever I use it, I go
11 there and take out.

12 INTERVIEWER ROBINSON: So for your second
13 experiment of the day you had to go back to the freezer and
14 draw out?

15 DR. LI: Start this process again, yes.

16 INTERVIEWER ROBINSON: Let it thaw for 45
17 minutes?

18 DR. LI: Yes. No, no. Maybe only 10 minutes.

19 INTERVIEWER ROBINSON: Ten minutes?

20 DR. LI: Yes depending on where you put. If
21 it's water bath, it's only 10 minutes. If it's on the room
22 temperature, it takes about 20 to 25 minutes.

23 INTERVIEWER ROBINSON: Okay. And you proceeded
24 with that experiment?

25 DR. LI: Experiment. I think it's maybe around

1 2:30 to 3:00 o'clock. And I started another round of
2 experiment here.

3 INTERVIEWER ROBINSON: During that time do you
4 remember eating or drinking anything?

5 DR. LI: No.

6 INTERVIEWER ROBINSON: I know you said earlier
7 that you don't drink very much water. So that it's very
8 seldom. You don't very often take your coffee cup to the
9 water and get a coffee cup full of water?

10 DR. LI: Yes. Usually if I drink, I will just
11 take the coffee cup to the conference room depending on the
12 occasion. If it's the first time I drink, instead of going
13 to water cooler, I usually always go to the sink first,
14 flush twice with tap water. And then I start to fill in
15 with spring water drink.

16 If it's the second time I drink during that
17 day, then I usually don't flush, but in the morning I
18 always flush.

19 INTERVIEWER ROBINSON: And when you fill up
20 your coffee cup with the spring water, do you usually drink
21 all of that or do you take it back to your desk with you or
22 --

23 DR. LI: No. I usually drink all of them.
24 It's not permitted --

25 INTERVIEWER ROBINSON: Oh, I see.

1 DR. LI: -- to put a drink on top of your desk
2 because it's inside the lab area. It's a Level 2
3 violation.

4 INTERVIEWER ROBINSON: Oh, okay.

5 DR. LI: You can have four Level 2 violations.

6 INTERVIEWER ROBINSON: Four levels?

7 DR. LI: No. You can have four Level 2
8 violations before you are terminated. So we have Level 1
9 violations. Level 1 violation is you eat food in the lab.
10 It's Level 1 violation. And if you are caught once, you
11 are finished.

12 INTERVIEWER ROBINSON: One time?

13 DR. LI: Yes, yes.

14 INTERVIEWER ROBINSON: On a Level 1? Four
15 times on a Level 2?

16 DR. LI: Yes, Level 2. So if you drink water
17 in the desk area, in the lab area, from my training I
18 received at MIT, I know it's a Level 2 violation.

19 INTERVIEWER ROBINSON: Okay.

20 INTERVIEWER SHERBINI: Which training is that,
21 radiation training?

22 DR. LI: I think it's my science school
23 training. When I came in as a post-doc, I received a
24 radioactivity training. And I received a training book.
25 And also there is a safety training seminar for the

1 science, school of science. So I can't remember which one
2 it said that.

3 So I always tell people when I saw someone
4 eating or drinking in the lab. I always tell them, "Look,
5 this is a Level 1" or "Level 2 violation. If you are
6 caught, you are out. So please pay me money. This is my"
7 -- I'm just joking.

8 INTERVIEWER ROBINSON: Yes, I know.

9 Do you remember seeing anyone doing that
10 recently and telling them, warning them about that?

11 DR. LI: Yes, yes.

12 INTERVIEWER ROBINSON: Who?

13 DR. LI: I remember Suzanna, Suzanna. I forgot
14 the last name. It's a difficult last name.

15 INTERVIEWER ROBINSON: Yes. Suzanna.

16 DR. LI: Yes, Marusic-Galesic. Yes. I told
17 her several times, actually, when she was eating there.
18 And I told her, "This is a Level 1 violation. If you want
19 to have a career, you should stop it."

20 INTERVIEWER ROBINSON: Oh. So she was eating
21 food in there, not just drinking water?

22 DR. LI: Yes.

23 INTERVIEWER ROBINSON: Okay.

24 INTERVIEWER SHERBINI: Is that common for many
25 people to do that sort of thing?

1 DR. LI: Yes, a few other people. Whenever, I
2 always tell them. I think it's my -- as an older post-doc,
3 it's my --

4 INTERVIEWER ROBINSON: Duty.

5 DR. LI: -- responsibility to let them know.
6 They can ignore my warning, but I have to let them know
7 it's Level 2 violations. They thought that I'm crazy.

8 INTERVIEWER ROBINSON: Anyone else that you --

9 DR. LI: Lot of other people.

10 INTERVIEWER ROBINSON: A lot of other people.

11 Okay.

12 DR. LI: I remember. I still can remember I
13 talked to her about this because this is so different. She
14 was laughing at me. And I told her it's a serious thing,
15 "You cannot do that."

16 INTERVIEWER SHERBINI: You've been here five
17 years; right?

18 DR. LI: Four years.

19 INTERVIEWER SHERBINI: Four years. How many
20 times were you trained on these things?

21 DR. LI: Once, once.

22 INTERVIEWER SHERBINI: When you first came?

23 DR. LI: When I first came. You know, I'm from
24 China. Starting from school, you are trained to obey
25 orders. If senior post authority gave you order, you

1 usually follow. It's not like U.S. You can ignore orders.
2 So we usually take it seriously.

3 So that's why they were always laughing at me.

4 INTERVIEWER ROBINSON: Okay. And drinking is a
5 Level 2?

6 DR. LI: Drinking, Level 2, yes.

7 INTERVIEWER SHERBINI: Are there other levels
8 or just 1 and 2?

9 DR. LI: I think you have two levels. Store
10 food in the -- yes, store food in the working area, like
11 you have food in the -- store food in the refrigerator
12 where you are supposed to do experiment, it's a Level 2,
13 too.

14 INTERVIEWER ROBINSON: That's a Level 2?

15 DR. LI: Yes, Level 2. So if you find once,
16 you put food in the cold room, for example, in the
17 refrigerator, I think it's a Level 2 violation.

18 INTERVIEWER ROBINSON: Okay.

19 DR. LI: I've never seen MIT authority
20 reinforce these.

21 INTERVIEWER ROBINSON: Have you seen food being
22 stored in that other -- in the refrigerator in the lab?

23 DR. LI: No, no.

24 INTERVIEWER ROBINSON: No?

25 DR. LI: No, I have never seen in the

1 refrigerators in the lab. I've never seen someone get
2 caught from this violation. I just --

3 INTERVIEWER SHERBINI: Who is supposed to catch
4 them, the lab manager or --

5 DR. LI: I don't know. I don't know. Maybe
6 MIT police.

7 INTERVIEWER ROBINSON: Do you feel that Dr.
8 Tonegawa would be concerned about that?

9 DR. LI: About the?

10 INTERVIEWER ROBINSON: Would he file a report
11 if he caught someone eating or drinking in the lab?

12 DR. LI: Oh, no, no.

13 INTERVIEWER ROBINSON: Don't think he would?

14 DR. LI: He would not. I don't think.

15 INTERVIEWER ROBINSON: Don't think so. Okay.

16 DR. LI: I don't think he knows that. I don't
17 think --

18 INTERVIEWER ROBINSON: Okay. You're in the
19 afternoon of Monday, the 14th now. And you are into your
20 second experiment.

21 DR. LI: Yes.

22 INTERVIEWER ROBINSON: Do you remember -- I may
23 have asked you this. Do you remember eating or drinking
24 anything during the course of that experiment?

25 DR. LI: No, I can't remember. I think I

1 didn't drink --

2 INTERVIEWER ROBINSON: Okay, okay. About what
3 time did that experiment finish?

4 DR. LI: Finish, yes. That's what I'm trying
5 to determine. So if it start at 2:30, then four hours,
6 four and a half should finish. So you should be finished
7 around 6:00 to 7:00 o'clock, 6:00 or 7:00 o'clock.

8 INTERVIEWER ROBINSON: And you had to dispose
9 of some waste after that experiment; right?

10 DR. LI: Yes, yes. So at usual at the end of
11 experiment, I also determined the incorporation. Okay? So
12 this time it worked. So in the supernatant or in the probe
13 section, I got around 30 percent in there. It's not two or
14 five percent in the first experiment. But it's still not
15 good enough.

16 INTERVIEWER SHERBINI: What's good enough?

17 DR. LI: This can be used for experiment. It's
18 enough incorporation there. But I usually want to do
19 things perfect. I want to have more than 50 or 80 percent.
20 So that's why I don't think I used these other solutions.
21 I probably disposed of them right away.

22 So I should finish around 7:00 o'clock. Yes.
23 So in between I also talked to Hayden.

24 INTERVIEWER SHERBINI: Who?

25 DR. LI: Hayden Prosser, I think, Hayden

1 Prosser.

2 INTERVIEWER ROBINSON: Hayden Prosser?

3 DR. LI: Yes, Hayden Prosser. And I also
4 talked to Dr. Yanyan Wang. I got something called library
5 membranes. So in order to isolate the genes from library,
6 you have to isolate them from a membrane. So this is in my
7 notebook.

8 INTERVIEWER ROBINSON: So at least those two
9 people were in the lab with you on Monday?

10 DR. LI: On Monday, yes. Sure, sure.

11 INTERVIEWER ROBINSON: But on Monday probably
12 almost everybody was in the lab?

13 DR. LI: Yes, yes.

14 INTERVIEWER ROBINSON: During the whole day of
15 Monday in the lab, did you notice any unusual activity
16 around the food refrigerator or anywhere in the lab?

17 DR. LI: No.

18 INTERVIEWER ROBINSON: Nothing unusual?

19 DR. LI: No, nothing unusual.

20 INTERVIEWER ROBINSON: Did you notice any
21 people coming into the lab that you didn't know or
22 strangers?

23 DR. LI: No.

24 INTERVIEWER ROBINSON: Okay.

25 DR. LI: Probably there are people, delivery

1 people, going into lab to deliver like isotope box or
2 deliver dry ice. Every we get dry ice. So those people
3 are familiar faces from outside the lab. They just come
4 in, drop in the lab.

5 INTERVIEWER ROBINSON: Okay. Did you get into
6 any arguments with anyone in the lab that day?

7 DR. LI: I remember I had a argument with a
8 fellow post-doc next to me because on that day I just told
9 you -- I just told you yesterday or the day before on
10 Sunday I went to the car dealer. So they offered me a
11 price for car, which I will not have the anti-lock brake in
12 that car.

13 And since the offer was so good, my wife was
14 tempted to buy that car. And my wife repeatedly got phone
15 call from the car dealer asking to go. So then during that
16 day my wife called me, asking me what we should do, whether
17 we should buy a car without anti-lock brake, always on
18 anti-lock brake, stuff like that.

19 INTERVIEWER ROBINSON: Okay.

20 DR. LI: And at first we decided to buy that
21 car without anti-lock brake. So Dr. Shen, she was sitting
22 next to me.

23 INTERVIEWER ROBINSON: This is Jie Shen?

24 DR. LI: Jie Shen. Yes.

25 INTERVIEWER ROBINSON: Okay.

1 DR. LI: So Dr. Shen told me I should have a
2 car with anti-lock brake. She said she once had a Honda
3 with anti-lock brake and it drove very well and it's pretty
4 good. And on that day I phoned my wife and told her that
5 probably we needed anti-lock brake. It's probably much
6 safer.

7 Dr. Shen told me I should have the -- a moon
8 roof in the car, yes, a moon roof in ten car. She said if
9 you don't have a moon roof, you will have difficulty to
10 sell that car because a lot of people expect to have a moon
11 roof. And I didn't agree with her.

12 I remember vaguely only one sentence. We
13 argued a lot. She was telling me I was not stop like that.
14 And I remember. I remember telling her that I don't care
15 about the money. I told her something like that. I just,
16 "I just want to be quiet. I just want to be able to do
17 science. If it's an extra \$2,000 I lost, I don't care. I
18 just want to do science."

19 And she was telling me like, you know, why I
20 spend \$25,000 on a car but I don't want to spend money on a
21 moon roof or a CD player, another thing, CD player.

22 And I said I don't want to listen to music in
23 the car and why I needed to buy a CD player. And she was
24 saying "If you don't have all those things, you can have
25 difficulties to sell them." So I remember I told her

1 something like that. I said, "I don't care about this. I
2 just want to be simple to do science."

3 INTERVIEWER ROBINSON: So you didn't want to
4 talk about that anymore?

5 DR. LI: Yes.

6 INTERVIEWER ROBINSON: You just wanted to get on
7 with your job?

8 DR. LI: Yes. I just wanted to --

9 INTERVIEWER ROBINSON: Was this kind of a
10 friendly argument or friendly discussion was this more of a
11 serious discussion?

12 DR. LI: It's getting go the relationship
13 between me and this post-doc fellow. I think it's pretty
14 bitterness. The chemistry between us was not great. It's
15 simply just because she was very aggressive, I think she
16 was very arrogant.

17 INTERVIEWER ROBINSON: Yes. It sounds like she
18 was trying to tell you how to run your life a little bit.

19 DR. LI: Yes. She was very arrogant. She was
20 a new post-doc. She was -- at that time she was a new
21 post-doc, but she was very arrogant.

22 INTERVIEWER ROBINSON: Arrogant?

23 DR. LI: And I usually don't like to talk to
24 her. And she overheard me one time discussing with my
25 wife. So I said something, I think, not polite, something

1 like that.

2 I said, "I don't care I spend \$25,000 on a car.
3 I want to spend. I want this. I don't care whether I need
4 a moon roof. If you want a moon roof, that's fine. It's
5 your problem."

6 INTERVIEWER ROBINSON: Yes.

7 DR. LI: "And I just want a car without a moon
8 roof, without a CD player. And I won't have one like that.
9 I don't care what you want," something like that. I don't
10 think it's an argument. It's just --

11 INTERVIEWER ROBINSON: She was just kind of
12 bothering you and keeping you from your doing your science
13 maybe?

14 DR. LI: It's just I don't like that type of
15 thing. It's not like Dr. Ming Xu. When I discuss
16 something with him, he will always give me a chance to say
17 "I don't know how you think about this. I think this might
18 be better or that might be better." That's a nice way of
19 impact. But these cases different. So that's why I
20 remember this.

21 And I told her. I said, "Listen, I work alone
22 two hours in the lab. I don't have a lot of time to worry
23 about this small thing." If my wife needs a new car and I
24 buy her a new car and if it's \$25,000, then we spend
25 \$25,000. That's it. And I want to get back to work.

1 That's my main job.

2 INTERVIEWER ROBINSON: Any other discussions or
3 arguments on the 14th, on Monday, the 14th, arguments with
4 anyone which you can remember?

5 DR. LI: No. Because this here I have a -- I
6 can recall that.

7 INTERVIEWER ROBINSON: Yes.

8 DR. LI: I have used all these here. I don't
9 think I can remember any more.

10 INTERVIEWER ROBINSON: Okay. Well, if you
11 can't. And if you think of something later that may be
12 important --

13 DR. LI: Another activity I might have had is I
14 might have come to the MIT Coop, MIT Coop, which is a
15 bookstore. I might have checked the book inside, in
16 between my experiment, to see whether I need anti-lock
17 brake or not. But other than that, that's all the activity
18 I can recall for that day.

19 INTERVIEWER ROBINSON: And getting back to your
20 experiment, you completed your experiment somewhere between
21 6:00 and 7:00 o'clock.

22 DR. LI: About 7:00 o'clock I would say, 7:00
23 o'clock.

24 INTERVIEWER ROBINSON: And was that your last
25 experiment of the day?

1 DR. LI: Yes, it's the last experiment.

2 INTERVIEWER ROBINSON: And so, to the best of
3 your memory, what were your disposal and survey and cleanup
4 activities at that point?

5 DR. LI: So I think first I calculated
6 incorporation here. So it's about 40 percent of
7 incorporation.

8 INTERVIEWER ROBINSON: Oh, okay. Still not
9 over 50 percent?

10 DR. LI: It's good. It's on the lower end. So
11 I just -- I think I disposed them into this round trash can
12 before I took off. I should have surveyed, surveyed my
13 hand.

14 INTERVIEWER ROBINSON: Do you specifically
15 remember surveying or you know that by habit you should
16 have surveyed?

17 DR. LI: I think by habit I should have
18 surveyed. It's that kind of subconsciousness you don't
19 have to remember doing this.

20 INTERVIEWER ROBINSON: If the gloves you had
21 used in your last experiment on any day are clean, do you
22 save them and use them the next day?

23 DR. LI: No. I usually put them into regular
24 trash.

25 INTERVIEWER ROBINSON: So you're going to

1 dispose of the gloves. It's just whether you go regular
2 trash or --

3 DR. LI: Or radioactive trash, yes.

4 INTERVIEWER ROBINSON: And then did you also
5 survey your bare hands?

6 DR. LI: No because if I survey my glove to
7 hands, it's not radioactive, usually I do not survey my
8 bare hands because they cannot shield with a glove. If
9 your hand is radioactive, it should be radioactive with
10 your glove off.

11 INTERVIEWER ROBINSON: Do you remember that on
12 the 14th, Monday, the 14th, your gloves were clean?

13 DR. LI: Yes, it should be clean.

14 INTERVIEWER ROBINSON: Do you remember that
15 they were clean on the 14th?

16 DR. LI: I can't remember when they were clean
17 or not because -- at least I couldn't with the impact of
18 the high activity I detected by --

19 INTERVIEWER ROBINSON: Yes.

20 DR. LI: It should be much lower than that
21 level. Otherwise it would have caught my notice
22 immediately.

23 INTERVIEWER ROBINSON: So there was nothing
24 alarming to you about the activity on the gloves on the
25 14th?

1 DR. LI: It's not that high.

2 INTERVIEWER ROBINSON: And if there was nothing
3 alarming to you about the activity on the gloves, you
4 probably would not have surveyed your hands?

5 DR. LI: No.

6 INTERVIEWER ROBINSON: Okay. Well, I notice
7 that it's about 3 minutes of 11:00 o'clock. And in order
8 that you be able to keep your appointment with your doctor,
9 we are certainly going to terminate the interview today.

10 DR. LI: Yes, yes.

11 INTERVIEWER ROBINSON: I will be in touch with
12 you directly. I have your phone number at home. You gave
13 me your phone number.

14 DR. LI: Yes.

15 INTERVIEWER ROBINSON: And I will call you at
16 home, and we can make arrangements to continue. Okay?

17 DR. LI: Yes. Do you have time this afternoon?

18 INTERVIEWER ROBINSON: I can probably have some
19 time this afternoon. What time would be convenient with
20 you?

21 DR. LI: I should finish with doctor's
22 appointment 1:00 or 2:00 o'clock. I can briefly go home or
23 I can still stay here. I can come directly here. In
24 between I should go out for lunch. That's all I need.

25 INTERVIEWER ROBINSON: We'll determine that

1 after we go off the record of the interview.

2 DR. LI: Okay.

3 INTERVIEWER ROBINSON: It's now 10:58, and the
4 interview is completed.

5 (Whereupon, the foregoing matter was recessed
6 at 10:58 a.m., to be reconvened sine die.)

C E R T I F I C A T E

This is to certify that the attached proceedings before the United States Nuclear Regulatory Commission in the matter of:

Name of Proceeding: INTERVIEW WITH DR. YUQING LI

Docket Number: --

Place of Proceeding: Cambridge, Massachusetts

were held as herein appears, and that this is the original transcript thereof for the file of the United States Nuclear Regulatory Commission taken by me and, thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing proceedings.

C. Pyott
Official Reporter
Neal R. Gross and Co., Inc.