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UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE PATENT TRIAL AND APPEAL BOARD

Case No. IPR2004-01419

ILLUMINA, INC., :
Petitioner, :
vs. :
MOLECULAR LOOP BIOSCIENCES, INC., :
Patent Owner. :
:

DEPOSITION UNDER ORAL EXAMINATION OF:

PATRICK R.H. WALLER, PH.D.

September 26, 2025

REPORTED BY: JENNIFER L. WIELAGE, CCR, RPR, CRR

JOB # 601782

1 TRANSCRIPT of the in-person deposition of
2 the above-named witness, called for Oral Examination
3 in the above-entitled matter, said deposition being
4 taken pursuant to Federal Court Rules, by and before
5 JENNIFER L. WIELAGE, Certified Shorthand Reporter and
6 Notary Public of the State of New York, License No.
7 XI01916, at the office of Desmarais, LLP, 230 Park
8 Avenue, New York, New York on Friday,
9 September 26, 2025, commencing at 9:00 in the
10 forenoon.

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

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I N D E X

W I T N E S S

Testimony of:

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E X H I B I T S

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PREVIOUSLY MARKED EXHIBITS

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2021	E-mail, March 6, 2009,	23
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2 DIRECTION TO WITNESS NOT TO ANSWER

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1 THE VIDEOGRAPHER: Here begins Media
2 No. 1 in the videotaped deposition of Dr. Patrick RH
3 Waller in the matter of Illumina, Inc., Petitioner
4 vs. Molecular Biosciences, Inc., Patent Owner in the
5 United States Patent and Trademark Office before the
6 Patent Trial and Appeal Board, in -- the Case Number
7 is IR -- I'm sorry, IPR2024-01419.

8 Today's date is September 26, 2025.
9 The time on the video monitor is 9:13 a.m. The
10 videographer today is Wes Sivertson representing
11 Planet Depos. This video deposition is taking place
12 at 230 Park Avenue, 26th Floor, New York, New York.

13 Would counsel please voice identify
14 themselves and state whom they represent?

15 MR. BROUGHAN: Tom Broughan from
16 Sidley Austin on behalf of Petitioner, Illumina.
17 With me is Marcus Burch of Illumina.

18 MR. WUESTE: Marcus Wueste on behalf
19 of Desmarais, Latham & Watkins on behalf of Molecular
20 Loop.

21 THE VIDEOGRAPHER: The court reporter
22 today is Jennifer Wielage representing Planet Depos.

1 The witness will now be sworn.

2 PATRICK R.H. WALLER, PH.D.,

3 74 Walnut Street, Natick, Massachusetts, 01760 having
4 been first duly sworn, testifies as follows:

5 EXAMINATION BY MR. BROUGHAN:

6 Q. Good morning.

7 A. Good morning.

8 Q. Would you please state your full name
9 for the record?

10 A. So it's Patrick Robert Henson Waller.

11 Q. Have you been deposed before?

12 A. I have not, no.

13 Q. You may generally be familiar with
14 deposition procedure, but I'll go over some of the
15 basics.

16 A. Uh-huh.

17 Q. If I ask you a question and you don't
18 understand it, please just let me know, and I'll be
19 happy to rephrase or say it again more loudly.

20 A. Yeah, yeah.

21 Q. If you answer, I'll assume that you
22 heard me and understood. Our court reporter is

1 taking down everything we say. So it's important
2 that we answer verbally. Head nods won't be picked
3 up.

4 A. Okay.

5 Q. Similarly, we need to make sure we
6 don't speak over each other, because it will make it
7 difficult for the court reporter. If you need to
8 take a break for any reason, just let me know. If
9 there's a question pending, I'd ask for you to answer
10 it first but otherwise I'm happy to take a break, if
11 needed.

12 Is there any reason that you cannot
13 give full and complete testimony today?

14 A. No.

15 THE VIDEOGRAPHER: Would you mind
16 giving a count down for me?

17 THE DEPONENT: 5, 4, 3, 2, 1.

18 BY MR. BROUGHAN:

19 Q. I see you have a document in front of
20 you. What's in there?

21 A. So that's my declaration and the
22 exhibits.

1 Q. Okay. May I just glance at the tab
2 so I can see what's there?

3 A. Yeah.

4 Q. Thank you. And there's no notes or
5 anything?

6 A. No.

7 Q. Great. Where do you work?

8 A. Wolf Greenfield.

9 Q. What's your title?

10 A. I'm a shareholder in the
11 biotechnology group at Wolf Greenfield.

12 Q. How long have you been there?

13 A. Since 2003.

14 Q. Is your practice focused on patent
15 prosecution?

16 A. Primarily patent prosecution and
17 counseling, some diligence, some licensing.

18 Q. Approximately how many patent
19 applications have you prosecuted?

20 A. I really don't know. It would
21 probably be in the hundreds but how many I really
22 don't know.

1 Q. You say you focus on biotechnology?

2 A. Primarily, yes.

3 Q. What does that mean to you?

4 A. It spans a lot of healthcare related
5 to molecular biology and cell biology, so proteins,
6 nucleic acids, cells.

7 Q. You've earned a Ph.D. in 1996?

8 A. Correct, yes.

9 Q. What was your Ph.D. in?

10 A. It was in -- it was the study of
11 protein degradation, targeted protein degradation.

12 Q. Do you recall what your thesis was
13 about?

14 A. Generally, yes, yes.

15 Q. What was it?

16 A. So it was about targeted protein
17 degradation and signals that target protein, so
18 aminoacid signals that target proteins for
19 degradation.

20 Q. It was 30 years ago, so perhaps your
21 memory is a touch fuzzy about it.

22 A. Right.

1 Q. After you finished your Ph.D.
2 program, what did you do?

3 A. I went to work at Testa, T-e-s-t-a,
4 Hurwitz, H-u-r-w-i-t-z and Thibeault, which is
5 T-h-i-b-e-a-u-l-t; a law firm in Boston.

6 Q. Did you prosecute patents there?

7 A. Yes.

8 Q. Why did you decide to go from a Ph.D.
9 program to patent prosecution?

10 A. I was interested in start-up
11 companies and sort of technology transfer from --
12 from the lab to business and a friend of mine was
13 working there at the time and had suggested I try
14 that line of work and so I tried it out and enjoyed
15 it.

16 Q. In early 2009, you represented Good
17 Start Genetics?

18 A. Correct, yes.

19 Q. What was Good Start Genetics?

20 A. At the time, it was a start-up
21 company.

22 Q. And you know who Greg Porreca is?

1 A. Yes.

2 Q. He worked for Good Start Genetics?

3 A. Yes.

4 Q. And you understand that this IPR
5 proceeding pertains to Dr. Porreca's '730 patent,
6 right?

7 A. Yes, yes.

8 Q. At that time, in early 2009, how did
9 you know Dr. Porreca?

10 A. I think I was introduced to him by
11 the CEO of the company, Eric Boutin.

12 Q. In early 2009, how did you know Eric
13 Boutin?

14 A. I don't actually remember how we
15 first made connections but it could have been through
16 some investors is most likely that's how some of the
17 start-up work came in.

18 Q. You joined Wolf Greenfield in 2003?

19 A. Correct, yes.

20 Q. In 2009, were you a shareholder at
21 Wolf?

22 A. Yes.

1 Q. What do you call it for short?

2 A. Wolf Greenfield or Wolf, either way
3 is fine.

4 Q. In early 2009, was there a particular
5 team that you, typically, worked with or did you work
6 alone? What was your process?

7 A. I tended to work with -- we have a
8 fairly large group and I worked with different people
9 on different clients, so most client recommendations
10 were as a team but it wasn't the same team for every
11 client.

12 Q. Do you know who Dan Young is?

13 A. Yes.

14 Q. You worked with Dr. Young on the Good
15 Start Genetics project in early 2009?

16 A. Correct, yes.

17 Q. Had you worked with Dr. Young before
18 at that point?

19 A. Yes.

20 Q. Approximately how many times?

21 A. It was probably continuous for two or
22 three years.

1 Q. Was Dr. Young --

2 A. I can't remember when he actually
3 started at the firm, but, basically, from the time he
4 started at the firm, I worked with him on different
5 clients.

6 Q. Was Dr. Young an attorney in early
7 2009?

8 A. He was in law school in 2009.

9 Q. Was he going to law school in the
10 evening and working at Wolf --

11 A. Yes.

12 Q. Sorry. I appreciate you giving an
13 answer --

14 A. Yes.

15 Q. But if you could give me --

16 A. Yes.

17 Q. Was Dr. Young going to law school in
18 the evening and going to work during the day in early
19 2009?

20 A. Yes.

21 Q. Do you know when Dr. Young graduated
22 law school?

1 A. No, it was either 2010 or 2011. I --
2 within two -- within two or three years of 2009. I
3 can't remember if that was his first, second or third
4 year of law school.

5 Q. During exams in law school, did
6 Dr. Young sometimes step away from work for a little
7 while to focus on exams?

8 A. Probably. I don't remember
9 specifically, but probably for a day, day or two
10 during exams.

11 Q. Did you work with anyone else aside
12 from Dr. Young on the Good Start Genetics projects in
13 early 2009?

14 A. No, no.

15 Q. Do you think having a Ph.D. in bio --
16 I'm sorry. I forget the exact thing but let me start
17 again. Do you think having a Ph.D. in biology is
18 beneficial to your work in prosecuting patents and
19 counseling clients?

20 A. In many instances, yes.

21 Q. How so?

22 A. Particularly for clients where the

1 technology is more detailed and sort of at the level
2 of research where you need to understand the context
3 and the terminology and the research.

4 Q. Do you think that the Good Start
5 Genetics and the '730 patent materials fall into that
6 category?

7 A. Yes.

8 Q. In early 2009, do you have any sense
9 for how many patent applications you had prosecuted?

10 A. Again, probably hundreds by then. So
11 I'd been prosecuting since '96, you know, 10, 20, 30
12 a year.

13 Q. At that time, how would you decide
14 whether to file a provisional application or start
15 with filing a utility application?

16 A. Usually we filed provisionals for
17 start-up companies in the bio space for -- for patent
18 term purposes so that the actual -- for patent term
19 purposes so that the 20-year patent term clock
20 wouldn't start until the filing of the PCT or the
21 utility.

22 Q. How would you decide whether to file

1 a PCT or a U.S. utility application?

2 A. If the client was entrusted in
3 pursuing international protection, we would file a
4 PCT application.

5 Q. When filing an application, did you
6 do a prior art search beforehand?

7 A. Sometimes, but not always.

8 Q. How would you decide whether it was
9 appropriate to do a prior art search before filing an
10 application?

11 A. Sometimes we would -- well, we'd
12 suggest it to a client and if a client felt that they
13 were well aware of the prior art and they had better
14 knowledge than they thought we might be able to -- to
15 uncover, then we wouldn't do a prior art search.
16 Sometimes it was based on cost as well, so it was a
17 combination of whether the client wanted us to incur
18 the costs and whether they felt they knew the prior
19 art.

20 Q. In 2009, would you have, typically,
21 done the prior art search or would you have had a
22 more junior member of your team do it?

1 A. I would have, typically, had a more
2 junior member of the team do it.

3 Q. With respect to the applications that
4 became the '730 patent, did you do a prior art search
5 before filing those?

6 A. No, I don't think we did.

7 Q. Why not?

8 A. We were given a number of prior art
9 references by Greg, I think or Greg and maybe Eric
10 that they felt were the closest references that they
11 were aware of.

12 Q. In early 2009, what was your typical
13 practice for supervising junior people on your team?

14 A. Hum... I don't specifically remember,
15 but based on the way I've consistently practiced, it
16 would be working with them with the early meetings
17 with the client to make sure that we all both
18 understood all -- if there was a team, that we all
19 understood the technology and then asking them to
20 work on either reviewing prior art or searching prior
21 art if there was -- if there was a search to be done.
22 And then working on preparing claim outlines that we

1 would discuss together and then after that, we'd
2 discuss the outline of a patent application and
3 prepare drafts and during that time, we'd also send
4 drafts back and forth with the client to get
5 feedback.

6 Q. Did junior members of your team
7 sometimes draft applications on their own?

8 MR. WUESTE: One -- I don't think --
9 we've been very good about getting there, but just to
10 be clear, continue to answer generally and don't
11 reveal the substance of any attorney-client
12 communications for particular clients beyond this
13 matter.

14 THE DEPONENT: Sorry, so what was the
15 question?

16 BY MR. BROUGHAN:

17 Q. One moment. In early 2009, did
18 junior members of your team sometimes draft patent
19 applications on their own?

20 MR. WUESTE: And I'll extend the same
21 caution. Speak generally, but don't reveal the
22 substance or content of any attorney-client

1 communications or work product, all right, that does
2 not relate to the applications at issue in this
3 matter.

4 A. What do you mean by "on their own"?
5 BY MR. BROUGHAN:

6 Q. The junior attorney would create the
7 first draft of a patent application and send that
8 draft to the client?

9 A. Yes, it was -- it was -- I mean the
10 process usually involved first preparing the claims
11 and discussing the claims with the junior person and
12 often also getting feedback from the client before
13 preparing the patent application and then we would
14 generally -- you know, I don't remember the
15 specifics, but we would generally discuss the scope
16 of the application and what was needed to support the
17 claims and then the junior would prepare a draft of
18 that.

19 Q. Would you, typically, provide --
20 sorry, strike that.

21 When a junior prepared a patent
22 application -- a draft of a patent application, would

1 you, typically, review it and provide line edits or
2 comments in a document?

3 A. Yes, I would, typically -- well, not
4 necessarily line edits or line comments, but I would
5 review it and discuss it with the junior person.
6 Sometimes that would be in person. Sometimes by
7 e-mail.

8 Q. In early 2009, do you recall how many
9 active matters you had?

10 A. No, no.

11 Q. In early 2009, how long did it,
12 typically, take you or your team to draft a
13 provisional application?

14 A. It would probably vary but usually it
15 took a few weeks to review the disclosure, put the
16 claim set together, get comments back on that and
17 then a few weeks to put the application together, get
18 comments back on that and finalize it for filing.

19 Q. In the set of documents in front of
20 you --

21 A. Yeah.

22 Q. -- you have Exhibit 2021?

1 A. Yep.

2 Q. Okay. Do you recall what led up to
3 you -- I'm sorry. Strike that.

4 (Exhibit 2021, E-mail, March 6, 2009,
5 was previously for Identification marked at a prior
6 deposition.)

7 Exhibit 2021 is an e-mail from Eric
8 Boutin to you, correct?

9 A. Correct.

10 Q. That e-mail is dated March 6, 2009?

11 A. Correct.

12 Q. Do you recall what led up to Eric
13 Boutin sending you this e-mail in Exhibit 2021?

14 MR. WUESTE: And Dr. Waller, I'll
15 caution you again not to reveal the substance of
16 attorney-client communications that do not relate to
17 these particular applications for this matter.

18 A. I -- I don't actually specifically.

19 BY MR. BROUGHAN:

20 Q. In March 2009, did you know Greg
21 Porreca?

22 A. I certainly knew him through these

1 e-mails. I cannot remember whether I met him before
2 March 2009 or not.

3 Q. In the set of documents in front of
4 you, you also have Exhibit 2006, I guess, 7 and 8.

5 (Exhibit 2006, IPR2024-01419, was
6 previously for Identification marked at a
7 prior deposition.)

8 (Exhibit 2007, IPR2024-01419, was
9 previously for Identification marked at a
10 prior deposition.)

11 (Exhibit 2008, IPR2024-01419, was
12 previously for Identification marked at a
13 prior deposition.)

14 MR. BROUGHAN: The document process
15 is a little bit different here. Give me a second. I
16 assume you don't want copies of them.

17 MR. WUESTE: No need.

18 MR. BROUGHAN: I could give them to
19 you.

20 MR. WUESTE: Maybe have them.

21 BY MR. BROUGHAN:

22 Q. Exhibit 2006.

1 A. Yep.

2 Q. This is one of the attachments to the
3 e-mail that is marked as Exhibit 2021?

4 A. Yes.

5 Q. The title of the attachment is by as
6 protecting barcodes underscore v2.pdf?

7 A. Where do you see that? Oh, in the --

8 Q. Yeah, if you --

9 A. On Exhibit 2021.

10 Q. Exhibit 2021 in the e-mail top part,
11 it says: "Attachments." Do you see that?

12 A. Yes.

13 Q. The first attachment is bias
14 detecting barcodes v2.pdf.

15 Do you see that?

16 A. Yes.

17 Q. And is that the document that is --
18 that appears at Exhibit 2006?

19 A. Yes, I think so.

20 Q. And in Exhibit 2021, under the
21 attachments, there's also -- the last two bias
22 detecting barcodes Fig 1.pdf and bias detecting

1 barcodes Fig 2.pdf.

2 Do you see that?

3 A. Correct, yes, yes.

4 Q. Those are the documents that appear
5 as Exhibit 2007 and 2008, correct?

6 A. Correct.

7 Q. Exhibit 2006, this is the -- sorry,
8 strike that.

9 Exhibit 2006 is an initial draft from
10 Dr. Porreca of what became one of the provisionals to
11 the '730 patent, correct?

12 A. Correct.

13 Q. Do you recall that there were four
14 provisionals prepared that -- I guess turned into the
15 '73 patent -- '730 patent?

16 A. Yes, I do, yeah. I don't know if I
17 recall it as opposed to having be reminded of it by
18 the fact that it was on the face of the '730 patent,
19 but...

20 MR. BROUGHAN: The court reporter
21 will hand you what's been previously marked as
22 Exhibit 1008.

1 (Exhibit 1008, '358 Provisional
2 Application, was previously for
3 Identification marked at a prior deposition.)

4 BY MR. BROUGHAN:

5 Q. If you look on the front of Exhibit
6 1008, do you see it says a number under Document
7 Details?

8 A. Yes.

9 Q. And that number is 61/179,358?

10 A. Yes.

11 Q. Okay. Would it be understandable if
12 I call this the '358 provisional application?

13 A. Yes.

14 Q. Do you recognize Exhibit 1008 as the
15 provisional that resulted from Exhibit 2006?

16 A. Yes, it looks like it.

17 Q. Could I direct your attention to page
18 11 of 1008? Page 11.

19 A. So actual page 11, page 11, yes.

20 Q. Stamped?

21 A. Yep.

22 Q. The title is Methods and Compositions

1 for Reducing Diagnostic Errors Associated With Bias
2 in Preparations of Nucleic Acids.

3 Do you see that?

4 A. Yes.

5 Q. Do you see the Attorney Docket Number
6 below?

7 A. Yes.

8 Q. What is an Attorney Docket Number?

9 A. So it's an internal reference number
10 that we assign to patent applications.

11 Q. And the attorney reference number for
12 the '358 provisional is G0814.70002US00?

13 A. Correct.

14 Q. Each of the provisionals that you
15 prepared had its own Attorney Docket Number, correct?

16 A. Correct, yes.

17 Q. In preparing the four provisional
18 applications that became the '730 patent, did you
19 delegate the preparation of some of them to
20 Dr. Young?

21 A. I don't specifically remember but he
22 helped -- I think he probably helped on all of them.

1 He may have done more work on some than others, but I
2 don't remember the exact -- the exact sort of
3 allocation of work.

4 Q. Are you familiar -- or sorry, strike
5 that. You sometimes referred to what became the '358
6 provisional as Uri's application?

7 A. Yes. At least I see that from the
8 e-mails but I don't remember it specifically, but,
9 yes.

10 Q. Aside from looking at the e-mails,
11 you don't have an independent recollection of whether
12 the '358 provisional was referred to as Uri's
13 application?

14 A. No.

15 Q. If you turn back to Exhibit 2021,
16 please. At the bottom of page 1, there's a list with
17 No. 1, 2, 3.

18 Do you see that?

19 A. Yes, yep.

20 Q. And I guess on the bottom half of
21 Exhibit 2021 is an e-mail from Greg Porreca dated
22 March 6, 2009?

1 A. Correct, yes.

2 Q. Item 2 in Dr. Porreca's list is: How
3 much overlap do you see in the bias detecting
4 barcodes application with the patent reference called
5 out in Note 1 on page 1 (McCloskey et al).

6 Do you see that?

7 A. Yes, yep.

8 Q. Did you investigate that question
9 from Dr. Porreca?

10 A. I don't specifically remember, but I
11 have no reason to believe we didn't. And when you
12 ask whether I did, it could have been me. It could
13 have been Dan or both of us since we worked closely
14 together on all of these.

15 Q. Sitting here today, can you recall
16 whether you investigated the McCloskey reference in
17 response to Dr. Porreca's comment in Exhibit 2021?

18 A. No.

19 Q. Sitting here today do you know
20 whether Dr. Young investigated the McCloskey
21 reference in response to Dr. Porreca's comments in
22 Exhibit 2021?

1 A. No, but I have no reason to believe
2 we didn't -- or one of us didn't, since it was one of
3 the topics I think they wanted to discuss based on
4 this e-mail.

5 Q. If you go back to Exhibit 2006,
6 please.

7 Are you there?

8 A. Yes.

9 Q. The title of Exhibit 2006 is:
10 Methods For Reducing Bias in Preparations of Nucleic
11 Acids, correct?

12 A. Correct.

13 Q. At the bottom of page 1, there's part
14 of the sentence says: "Molecular barcodes that
15 uniquely identify individual samples that may be
16 mixed together."

17 Do you see that?

18 A. Yes. Carrying over to the top of
19 page 2, yes.

20 Q. Are you familiar with the term
21 "barcodes"?

22 A. Yes.

1 Q. What is a barcode to you?

2 A. It's a sequence that's used to
3 identify -- so a sequence of nucleic acid -- of
4 nucleotides that's used to identify a nucleic acid.
5 So a sequence that's generated -- not a
6 naturally-occurring sequence, but a sequence that's
7 generated as a tag, they're usually things that are
8 added to nucleic acids so you can tag them and trace
9 them.

10 Q. On page 2 of Exhibit 2006 near the
11 top, there's a Note 1.

12 Do you see Note 1?

13 A. Yes.

14 Q. Note 1 says: "There's some prior art
15 associated with random barcodes but I'm not sure if
16 it anticipates the applications we are interested
17 in."

18 Do you see that?

19 A. Yes.

20 Q. And Note 1 cites to U.S. PTO
21 Publication Number US 2007/0020640 A1 McCloskey, et
22 al?

1 A. Correct.

2 Q. If you go down to the summary of the
3 investigation. Do you see that?

4 A. Yes.

5 Q. The first sentence is: "The
6 invention is the composition and use of a large
7 library of unique molecular barcodes in preparative
8 steps for reducing the effects of the bias described
9 above."

10 Do you see that?

11 A. Yes.

12 Q. And 2006 describes the invention as
13 the use of a large library of unique molecular
14 barcodes, correct?

15 MR. WUESTE: Object to form;
16 misrepresents the document.

17 A. I mean that sentence says that -- I
18 mean that sentence says "the invention," but...

19 BY MR. BROUGHAN:

20 Q. Is it a random --

21 A. But the document describes a lot of
22 different things, but, yeah.

1 Q. Is there a difference to you between
2 barcode and a random barcode?

3 MR. WUESTE: I'll object to form and
4 scope.

5 A. Depending on the context, there may
6 be a difference. In some cases, specific known
7 barcodes of known sequences are introduced.

8 In some cases, when large numbers of
9 barcodes are used, they're random in the sense that
10 each nucleotide can -- each position can be any of
11 the four nucleotides.

12 BY MR. BROUGHAN:

13 Q. If you go to -- back to Exhibit
14 2005 -- well, actually -- maybe we haven't looked at
15 it yet.

16 You have Exhibit 2005 in front of
17 you, correct?

18 A. Is that --

19 Q. No, it's in your binder -- the bound
20 thing.

21 (Exhibit 2005, Declaration of Patrick
22 RH Waller Ph.D., was previously for

1 Identification marked at a prior deposition.)

2 A. Actually, I don't think I do. I
3 start at 2006.

4 BY MR. BROUGHAN:

5 Q. Oh, if you turn that -- may I --

6 A. Sure.

7 Q. It's the first document.

8 A. Oh, yes, I'm sorry. I do have that.

9 Q. Exhibit 2005 is a declaration that
10 you submitted in this IPR, correct?

11 A. Correct.

12 Q. If you turn to Paragraph 10 of your
13 declaration, please.

14 A. Yep.

15 Q. In Paragraph 10, you refer to an
16 April 24, 2009 e-mail that Dr. Young sent to
17 Dr. Porreca and you, correct?

18 A. Correct.

19 Q. And Exhibit 2012 is that e-mail,
20 correct?

21 A. Yes, that e-mail is included at the
22 end of Exhibit 2012.

1 (Exhibit 1045, ML-IPR000415 through
2 ML-IPR000417, was marked for Identification
3 by the court reporter.)

4 BY MR. BROUGHAN:

5 Q. The court reporter is handing you
6 what's been marked as Exhibit 1045.

7 A. Yes.

8 Q. Do you recognize Exhibit 1045?

9 A. It looks like the e-mail at the end
10 of Exhibit 2012, yes.

11 Q. You do recognize it. Yes?

12 A. I recognize it as being the same as
13 the e-mail at the end of Exhibit 2012.

14 Q. And Exhibit 1045 is an e-mail from
15 Dr. Young to Dr. Porreca cc'g you that's dated April
16 24, 2009?

17 A. Correct, at the top, yes.

18 Q. And Dr. Young references the attached
19 set of claims per Uri's application.

20 Do you see that?

21 A. Correct.

22 Q. If you turn the page, do you see

1 "Claims"?

2 A. Yes.

3 Q. Do you recognize these claims?

4 A. Yes.

5 Q. Did you draft the claims that are in
6 Exhibit 1045?

7 A. I don't remember whether I drafted
8 them or Dan did but most -- I think whoever drafted
9 them, we worked on them together, I would expect, but
10 I don't remember specifically.

11 Q. You don't specifically remember
12 working on the claims that appear in Exhibit 1045?

13 MR. WUESTE: Object to form;
14 misrepresents prior testimony.

15 A. I remember working on the claims for
16 this application. I don't specifically remember
17 whether I drafted them or Dan drafted them but we
18 worked on claims together.

19 BY MR. BROUGHAN:

20 Q. Can you look at Claim 1, Element I.

21 A. Element I?

22 Q. Yes.

1 A. Yeah.

2 Q. Or Claim 1, Element 1?

3 A. Yes.

4 Q. "Amplifying a plurality of nucleic
5 acids, each nucleic acid in the plurality having a
6 polymorphic sequence and a barcode sequence."

7 Do you see that?

8 A. Yes.

9 Q. Exhibit 2 -- or sorry, Element 2 also
10 references barcode sequences.

11 Do you see that?

12 A. Correct.

13 Q. And Element 3 references specific
14 barcode sequence.

15 Do you see that?

16 A. Correct, yes, yep.

17 Q. Do you know whether you reviewed the
18 claims in 1045 before they were sent to Dr. Porreca?

19 A. It was over 15 years ago, so I don't
20 know specifically but I would expect that I did. It
21 would be unusual that I wouldn't have reviewed the
22 claims.

1 Q. Go back to Exhibit 2005, please.

2 Look at Paragraph 11.

3 A. Yep.

4 Q. In Paragraph 11, the second sentence,
5 you note that Dr. Young responded to the e-mail chain
6 on April 28, 2009 with a slightly revised set of
7 claims.

8 You see that?

9 A. Correct, yes.

10 MR. BROUGHAN: Please mark this as
11 the next exhibit.

12 (Exhibit 1046, ML-IPR000427, was
13 marked for Identification by the court
14 reporter.)

15 BY MR. BROUGHAN:

16 Q. The court reporter has handed you
17 what's been marked as Exhibit 1046.

18 A. Correct.

19 Q. Do you recognize this document?

20 Do you recognize Exhibit 1046?

21 A. Yes. It looks like the e-mail
22 referred to in -- well, the e-mail that's included in

1 Exhibit 2012.

2 Q. Okay. Exhibit 1046 is an e-mail from
3 Dr. Young to Dr. Porreca, cc'g you, that's dated
4 April 28, 2009.

5 A. Correct.

6 Q. And in the e-mail -- or, sorry,
7 strike that.

8 In the e-mail at 1046, Dr. Young
9 states: "Please see the attached revised claim set
10 for Uri's application."

11 Do you see that?

12 A. Correct.

13 Q. He also states that: "We would like
14 to discuss these claims with you tomorrow in the
15 context of U.S. Patent Application 2007/0020640,
16 which was noted in the disclosure materials you
17 sent." Do you see that?

18 A. Correct.

19 Q. If you turn to the Bates that ends in
20 429. Sorry, you know what a Bates number is, right?

21 A. Yes.

22 Q. If you turn to the Bates that ends in

1 429.

2 A. Yep.

3 Q. Do you see Claim 1?

4 A. Yes.

5 Q. Claim 1, Element 1 recites amplifying
6 a plurality of molecular inversion probes each
7 comprising of polymorphic sequence and a source
8 sequence.

9 Do you see that?

10 A. Yes.

11 Q. There's no mention of barcodes in
12 element 1 of Claim 1, correct?

13 A. Correct.

14 Q. Element 2 mentions source sequences.

15 Do you see that?

16 A. Correct.

17 Q. Element 3 also mentions source
18 sequences.

19 Do you see that?

20 A. Correct, yes.

21 Q. Claim 1 does not recite barcodes
22 anymore, right?

1 A. The word is not there or the words --
2 the word barcode is not there. I think source
3 sequence was a term that we used instead of barcode.

4 Q. You replaced the term barcode with
5 source sequence in claim one --

6 A. Yeah.

7 Q. -- of what became the -- sorry, if
8 you could let me...

9 A. Sorry.

10 Q. You replaced the term barcode with
11 the term source sequence in Claim 1 of what became
12 the '730 patent, correct?

13 MR. WUESTE: Object to form.

14 A. It's correct that the word "barcode"
15 was replaced by "source" -- yeah, barcode sequence
16 was replaced by source sequence in this version of
17 the claims.

18 BY MR. BROUGHAN:

19 Q. Do you recall why you changed the
20 term "barcode" to "source sequence"?

21 A. No, not specifically.

22 Q. Do you recall generally why you

1 changed barcodes to source sequence?

2 A. Not -- not -- not generally, no. I
3 mean I know generally why we change terms, but not --
4 I don't know about this particular one.

5 Q. In the e-mail Dan stated that he
6 wanted to have a call. You can go back to the first
7 page of the --

8 A. Yeah.

9 Q. Yes, there you go. In the e-mail
10 that appears in 1046, Dr. Young stated that he wanted
11 to have a phone call --

12 A. Yeah, that we would like to have a
13 phone call, yeah.

14 Q. Did that phone call occur?

15 A. I don't know.

16 Q. Were you on that phone call?

17 A. I don't know. I don't know if it
18 occurred. I would assume it occurred and -- but I
19 have no reason to believe that it didn't and I would
20 expect that I would have been on it since it said "we
21 would like to discuss."

22 Q. On the first page of the document, in

1 Dr. Young's e-mail, he references that patent
2 application.

3 Do you see that?

4 A. Yes.

5 Q. And if you turn to the Bates that
6 ends '431. At Bates '431 in Exhibit 1046, this is
7 the patent application that Dr. Young referred to in
8 the e-mail?

9 A. Yes, yeah.

10 Q. The first named inventor of the
11 patent application is a Dr. Megan McCloskey.

12 Do you see that?

13 A. Yes.

14 Q. If I refer to this as the McCloskey
15 application, would that be understandable to you?

16 A. Yes.

17 (Exhibit 1047, ML-IPR-000463, was
18 marked for Identification by the court
19 reporter.)

20 MR. BROUGHAN: I don't been seem to
21 have another one. You could look at it for a second.

22 MR. WUESTE: Do you mind if I take

1 down the Bates number real quick, just so I can...

2 MR. BROUGHAN: Yeah, go ahead.

3 BY MR. BROUGHAN:

4 Q. The court reporter has handed you
5 what's been marked as Exhibit 1047.

6 A. Correct.

7 Q. Do you recognize this document?

8 A. Yes, it also appears to be part of
9 the e-mail trail on Exhibit 2012.

10 Q. Does this document refresh your
11 recollection as to whether a phone call occurred with
12 respect to Dr. Young's request in the April 29th
13 e-mail?

14 A. Yes.

15 Q. Did the phone call occur?

16 A. It suggests that it occurred, yes.

17 Q. Do you recall what was discussed on
18 that phone call?

19 A. No.

20 Q. Do you recall whether you were on
21 that phone call?

22 A. No. But again, I have no reason to

1 believe that I wasn't but I just don't remember.

2 Q. Based on the e-mail is a phone call I
3 guess likely occurred on April 29, 2009?

4 A. Likely.

5 Q. But you can't say for certain?

6 A. Correct. I can't remember.

7 Q. Do you know why Dr. Young wanted to
8 discuss the McCloskey application and the claims with
9 Dr. Porreca?

10 MR. WUESTE: Objection to form; calls
11 for speculation.

12 A. Yeah, I don't know.

13 BY MR. BROUGHAN:

14 Q. Do you recall discussing with
15 Dr. Young that it would have been beneficial to
16 discuss the -- the claims of the '358 provisional in
17 the context of the McCloskey application?

18 MR. WUESTE: Objection to form.

19 A. No, not specifically.

20 BY MR. BROUGHAN:

21 Q. Do you recall discussing the
22 McCloskey application with Dr. Young?

1 A. Not specifically.

2 Q. Do you recall --

3 A. But I have no reason to believe that
4 we didn't based on the e-mail. I just don't
5 remember.

6 Q. Do you recall discussing the
7 McCloskey application with Dr. Porreca?

8 A. Not specifically.

9 Q. Do you recall it generally?

10 A. No. Again, I have no reason to
11 believe we didn't based on the e-mail but I don't
12 remember the phone call, so I don't remember what we
13 discussed.

14 MR. BROUGHAN: Could you mark this as
15 the next exhibit, please?

16 (Exhibit 1048, ML-IPR-000061, was
17 marked for Identification by the court
18 reporter.)

19 BY MR. BROUGHAN:

20 Q. The court reporter has handed you
21 what's been marked as Exhibit 1048.

22 A. Yes, correct.

1 Q. Do you recognize this document?

2 A. It looks familiar. I think it's in
3 one of these exhibits, but... yeah, so it seems to be
4 part of Exhibit 2015.

5 Q. Exhibit 1048 is an e-mail from
6 Dr. Young to Dr. Porreca, cc'g you, dated May 14,
7 2009, correct?

8 A. Correct.

9 Q. The attachments -- there's two
10 attachments in the first, I guess, portion of each
11 attachment is G0814.70002 US00.

12 Do you see that?

13 A. Yes, yep.

14 Q. That's the Docket number for what
15 became the '358 provisional?

16 A. Correct.

17 Q. In Dr. Young's e-mail, he states:
18 "Thanks Greg. Attached is a draft of Uri's
19 application."

20 Do you see that?

21 A. Correct.

22 Q. And Dr. Young goes on: "We are still

1 thinking about the term source sequence and may
2 change it."

3 Do you see that?

4 A. Yes.

5 Q. Why were you still thinking about the
6 term "source sequence"?

7 A. I don't remember.

8 Q. Why were you considering changing the
9 term "source sequence"?

10 A. Again, I don't remember.

11 Q. Would you have been involved in the
12 decision to use the term "source sequence"?

13 A. Yes.

14 MR. BROUGHAN: Sorry. My page
15 numbers are written down incorrectly here.

16 Give me a moment.

17 Q. Okay. If you turn to the Bates that
18 ends in 066.

19 A. Yep.

20 Q. This is a page of the draft of the
21 provisional application?

22 A. Yes.

1 Q. Do you see Detailed Description of
2 the Invention?

3 A. Yes.

4 Q. The second-to-last sentence of that
5 paragraph it states --

6 A. Of the first paragraph?

7 Q. Yes.

8 A. The first paragraph in that section,
9 yep, yep.

10 Q. "In some embodiments, the source
11 sequence permits the detection of bias based on the
12 frequency with which pairs of source and target
13 sequences are observed in a sequencing reaction."

14 Do you see that?

15 A. Correct.

16 Q. And in the line before that one, it
17 states: "In certain embodiments, the disclosure
18 provides preparative methods for capturing source
19 nucleic acid, e.g. genetic loci, that involve the use
20 of source sequences to uniquely tag individual
21 nucleic acid modules."

22 Do you see that?

1 A. Correct.

2 Q. Source sequences are used to uniquely
3 tag individual nucleic acid molecules?

4 A. Correct.

5 Q. If you go to the next page that ends
6 in the 67 Bates number.

7 A. Yep.

8 Q. The first full paragraph states: "In
9 some embodiments, the invention relates to
10 compositions comprising, and methods for using, a
11 large library of identifier nucleic acids consisting
12 of 'source sequences' in preparative steps for
13 reducing the effects of the bias and for facilitating
14 genotyping of the target sequences."

15 Do you see that?

16 A. Correct.

17 Q. And if you go down to the third full
18 paragraph that starts with "large library," do you
19 see that?

20 A. Yes.

21 Q. And it refers to: "A large library
22 of unique source sequences that may be created by

1 using degenerate random sequence polynucleotides of
2 defined length."

3 You see that?

4 A. Correct, yes.

5 Q. And then further down in this
6 paragraph, there's a reference to 4^n .

7 Do you see that?

8 A. Yes.

9 Q. And if you go to the last paragraph
10 on the page, it refers to: "In the final readout of
11 the sequencing product, each read may have an
12 additional unique source sequence."

13 Do you see that?

14 A. Yes.

15 Q. There's a bracketed italicized
16 sentence or two there at the end of the paragraph
17 there.

18 Do you see?

19 A. Yes.

20 Q. And it says: "Right? Assuming we
21 had a uniform distribution of barcodes that were
22 amplified."

1 Do you see that?

2 A. Yes.

3 Q. So go back to Exhibit 2006 -- when
4 you're finished looking -- 2006, it's in your binder
5 or bound copy of --

6 A. Okay.

7 Q. I have to find my Exhibit 2006.

8 On page 2 of 2006 --

9 A. Yes, page 2.

10 Q. Okay. The first sentence under
11 "Summary of the Invention," again -- sorry, we looked
12 at the first sentence earlier?

13 A. Yes, yep.

14 Q. And it refers to "a large library of
15 unique molecular barcodes." Do you see that?

16 A. Yes.

17 Q. In the second paragraph, there's
18 further discussion of barcodes and about halfway down
19 the paragraph, do you see 4^n again?

20 A. Correct, yes.

21 Q. In the last paragraph that starts on
22 page 2, it says: "In the final readout of the

1 sequencing process, each read has an additional
2 unique barcode sequence."

3 Do you see that?

4 A. Correct, yes.

5 Q. Do you know why Dr. Young changed
6 "barcode" to "source sequence" when going from
7 Dr. Porreca's draft to the draft sent on May 14th?

8 MR. WUESTE: Object to form; calls
9 for speculation.

10 A. Yeah, I don't remember.

11 BY MR. BROUGHAN:

12 Q. Sitting here today, you can't say why
13 the change was made?

14 MR. WUESTE: Object to form; asked
15 and answered.

16 A. Yeah, I don't -- I don't remember.

17 BY MR. BROUGHAN:

18 Q. Do you recall discussing that change
19 with Dr. Young?

20 A. I don't remember discussing the
21 specific change. I know we discussed the claims in
22 the application. So I have no reason to believe we

1 didn't discuss it, but I don't remember it.

2 Q. Do you recall reviewing the draft
3 application that Dr. Young sent to Dr. Porreca on May
4 14, 2009?

5 A. I don't recall doing that, no. I
6 assume that I did.

7 Q. The draft of the provisional that
8 Dr. Porreca sent to you on March 6 uses the word
9 "barcode" 68 times.

10 Does that sound right to you?

11 A. Without reviewing it -- it doesn't
12 sound unreasonable. I could believe that.

13 Q. The May 14th draft of the provisional
14 application that Dr. Young sent to Dr. Porreca uses
15 the term "barcode" twice.

16 Would that surprise you?

17 A. You mean in this Exhibit 1048? No.

18 Q. If you can go back to your
19 declaration, please. That's Exhibit 2005.

20 A. Yep.

21 Q. If you look at Paragraph 15.

22 A. Yep.

1 Q. In the first sentence, you note that:
2 "On May 6, 2009, Dr. Porreca sent me an e-mail
3 following up on a discussion the day before."

4 Do you see that?

5 A. Yes.

6 Q. Do you recall having a discussion
7 with Dr. Porreca on May 5, 2009?

8 A. No.

9 Q. Do you know what was -- strike that.

10 I take it then that you would not
11 recall what was discussed on a phone call that may
12 have occurred on May 5, 2009?

13 A. No, no.

14 Q. Paragraph 16 of your declaration?

15 A. Yep.

16 Q. The last sentence, you state that I
17 responded that I would discuss a target date with
18 Dr. Young but that the draft was mostly complete.

19 You see that?

20 A. Correct.

21 Q. Why did you need to discuss a target
22 date with Dr. Young before telling Dr. Porreca when a

1 draft would be sent to him?

2 A. I don't specifically remember but I
3 suspect because Dr. Porreca wanted to know when we'd
4 be finished with the application and Dr. Young was
5 working on it so I wanted to get a sense of his
6 timeline.

7 Q. Dr. Young had the pen for drafting
8 the '358 provisional?

9 MR. WUESTE: Object to form;
10 mischaracterizes prior testimony. Sorry.

11 A. He was working on the application
12 with me, so he was drafting some aspects of it, yes.
13 I don't remember specifically how much of it he was
14 drafting versus what I was drafting but he was
15 certainly drafting the updates.

16 BY MR. BROUGHAN:

17 Q. Do you recall drafting any portion of
18 what became the '358 provisional application?

19 A. No. And by that, I mean I don't
20 remember. I just don't know.

21 Q. It's possible that Dr. Young drafted
22 the entirety of the '358 provisional application?

1 MR. WUESTE: Object to form.

2 A. I think it includes some of the
3 material that Dr. Porreca sent, so... but it's
4 possible that Dan, Dr. Young, put the application
5 together, but we worked -- we essentially worked
6 together on it. So, typically, in those -- in that
7 context, he would do more of the actual drafting, but
8 I would discuss the draft with him.

9 Q. Dr. Young was the more junior to you?

10 A. He was more junior, yeah. So I --
11 it's possible that I provided edits. It's possible
12 that I provided paragraphs.

13 Q. You had worked with Dr. Young for a
14 couple of years at this point in 2009?

15 A. I think so. I'd have to -- I worked
16 with him since he started at the firm.

17 Q. You trusted Dr. Young?

18 A. Yes.

19 Q. Dr. Young had provide you with
20 quality work product in the past?

21 A. Yes.

22 MR. BROUGHAN: We've been going for a

1 little over an hour. Why don't we take a break?

2 THE VIDEOGRAPHER: We are going off
3 the record. The time on the monitor is 10:31 p.m. --
4 a.m., excuse me.

5 (A brief recess was taken.)

6 THE VIDEOGRAPHER: We are back on the
7 record. The time on the monitor is 10:51 a.m.

8 BY MR. BROUGHAN:

9 Q. In your bound document --

10 A. Yep.

11 Q. -- you have Exhibit 2014, I think.

12 (Exhibit 2014, E-mail, May 14, 2009,
13 was previously for Identification marked at a
14 prior deposition.)

15 Q. Yes?

16 A. Yes.

17 Q. Could you turn to that?

18 A. Yep.

19 Q. Exhibit 2014 is an e-mail from you to
20 Dr. Porreca dated May 14, 2009?

21 A. Along the top, correct, yes.

22 Q. In the e-mail you reference a

1 last-minute filing that came in last night.

2 Do you see that?

3 A. Yes.

4 Q. Do you recall what that last-minute
5 filing was?

6 A. No, I don't.

7 Q. Do you often receive last-minute
8 filings or did you often receive last-minute filings
9 in 2009?

10 A. Not in -- I guess it depends what you
11 mean by "often," not daily, not weekly, but not --
12 you know, over a period of months, probably a few,
13 yes.

14 Q. In your e-mail, you state: "Dan is
15 back from exams this morning and is finalizing Uri's
16 application that he will send to you."

17 Do you see that?

18 A. Yes.

19 Q. Dan had exams for law school the
20 first week or two of May of 2009, correct?

21 A. Yeah, I don't remember the exact
22 dates. I'm not sure I knew the exact dates, but,

1 yes, typically, people who were in law school at
2 night have exams in the first week or two weeks of
3 May. And the schedule is slightly different every
4 year depending on what classes they take.

5 Q. During exams a portion of Dan's focus
6 would have been on exams and not work, correct?

7 MR. WUESTE: Object to form; calls
8 for speculation.

9 A. Yeah, I mean, he -- I can't remember
10 specifically with Dan but it's not uncommon for
11 people in law school to take a half day or something
12 to go and take an exam so over a few weeks, they
13 might take a few days off, a day off.

14 (Exhibit 1049, ML-IPR-000418, was
15 marked for Identification by the court
16 reporter.)

17 BY MR. BROUGHAN:

18 Q. The court reporter has handed you
19 what's been marked as Exhibit 1049.

20 Do you recognize this document?

21 A. I recognize the figure -- I recognize
22 the figure. The e-mail looks familiar.

1 Q. If you look at the last page of the
2 document...

3 A. Yes, I see part of this e-mail seems
4 to be part of Exhibit 2012. I'm not sure if the --
5 if the top part is -- I'm sorry. Looking at --

6 Q. The last page.

7 A. Yeah.

8 Q. Flip it --

9 A. The very last.

10 Q. Yeah.

11 A. Okay.

12 Q. Do you see the -- there's two
13 figures?

14 A. Yes, A and B.

15 Q. Okay. And if you look at -- just set
16 that kind of in front of you and look at Exhibit 2008
17 in your bound...

18 A. Yes.

19 Q. The two figures are the same or
20 essentially the same?

21 A. They -- yes, they look to be the
22 same.

1 Q. I guess we'll stick with 2008. In
2 the figure that's labeled A.

3 Do you see that?

4 A. Yes, so for clarity, you want me to
5 look at the 2008 -- they seem to be the same.

6 Q. Yes, sir.

7 A. Okay, yes.

8 Q. Part A of Exhibit 2008, do you see a
9 figure?

10 A. Yes, yes.

11 Q. There's two arrows that go from left
12 to right.

13 Do you see those?

14 A. Yes.

15 Q. The first one says "amplification"?

16 A. Correct.

17 Q. The second one says "collapse
18 barcodes"?

19 A. Correct.

20 Q. In the middle column, there's some
21 underscores, a "T" and then 1011.

22 Do you see that?

1 A. Correct, yes.

2 Q. 1011 in Figure A of Exhibit 2008 is a
3 barcode, correct?

4 MR. WUESTE: Object to form.

5 A. I mean I think barcodes are
6 nucleotide sequences, but the 1011 is an illustration
7 of a numerical illustration of a tag.

8 BY MR. BROUGHAN:

9 Q. 1011 is an example of a barcode,
10 correct?

11 MR. WUESTE: Object to form; asked
12 and answered.

13 A. I think 1011 is representing a tag
14 that -- an identifier tag that could be a barcode.
15 He mean all the numbers -- you're using 1011 as an
16 example, but yes.

17 Q. 010 is --

18 A. Same.

19 MR. WUESTE: Sorry, Doctor, please
20 let him finish his question first.

21 MR. BROUGHAN: I don't answer my own
22 questions.

1 BY MR. BROUGHAN:

2 Q. In Part A of Exhibit 2008, the
3 four-digit numerical code, each of those is an
4 example of a tag or barcode?

5 A. Yeah. They're an example of a tag,
6 an example of a unique identifier of the particular
7 sequence that's illustrated.

8 Q. The figure references collapse
9 barcodes, correct?

10 A. Correct.

11 Q. The figure indicates that those
12 four-digit numerical sequences are barcodes, correct?

13 A. It suggests that, yes.

14 Q. Okay. Let me hand you the next
15 document which is -- I guess we need to mark this.

16 (Exhibit 1050, E-mail, May 14, 2009,
17 was marked for Identification by the court
18 reporter.)

19 BY MR. BROUGHAN:

20 Q. Exhibit 1050 is an e-mail from
21 Dr. Porreca to you and Dr. Young dated May 14, 2009,
22 correct?

1 A. Correct.

2 Q. And it includes an attachment called
3 "method to increase sensitivity.doc."

4 Do you see that?

5 A. Correct.

6 Q. And if you turn the page, this is the
7 attachment?

8 A. It looks like it. I mean I don't
9 remember it specifically but it's consistent with --
10 with the attachment name, yeah.

11 Q. And the date is May 13, 2009?

12 A. Yes.

13 (Exhibit 1051, ML-IPR000610, was
14 marked for Identification by the court
15 reporter.)

16 BY MR. BROUGHAN:

17 Q. The court reporter is handing you
18 what's been marked as Exhibit 1051.

19 Do you recognize this document?

20 A. Not -- not specifically, but it looks
21 like an e-mail from Dan to Greg.

22 Q. You were cc'd on this e-mail?

1 A. Yes.

2 Q. Do you recall receiving this e-mail?

3 A. No.

4 Q. Do you recall receiving --

5 A. I have no reason to believe I didn't,
6 but I don't remember it.

7 Q. Do you recall receiving the e-mail
8 that is Exhibit 1050?

9 A. Same. I don't specifically remember
10 this. But no reason to believe I didn't.

11 Q. In 1051, Dr. Young says: "Hi Greg,
12 we will call you in ten minutes to discuss this new
13 application."

14 Do you see that?

15 A. Yes.

16 Q. Do you know why Dr. Young is calling
17 this "a new application"?

18 MR. WUESTE: Object to form; calls
19 for speculation.

20 A. No, I don't know. I mean the subject
21 is "new app" on the e-mail that Greg sent, but... so
22 I assume that's why, but I don't know.

1 BY MR. BROUGHAN:

2 Q. Sorry for jumping around a little
3 bit, but if you go back to Exhibit 1050.

4 A. 1050?

5 Q. Yes.

6 A. Okay.

7 Q. The second page that ends in Bates
8 23.

9 A. Yep.

10 Q. The title of this document is "Method
11 to Increase the Sensitivity of Sample Isolation For
12 DNA Sequencing," correct?

13 A. Correct.

14 (Exhibit 1052, ML-IPR-000789, was
15 marked for Identification by the court
16 reporter.)

17 BY MR. BROUGHAN:

18 Q. The court reporter is handing you
19 what's been marked as Exhibit 1052.

20 A. Yes.

21 Q. Do you recognize this document?

22 A. It's not unfamiliar but I don't

1 remember it specifically but it looks like an e-mail
2 from Dan to Greg cc'g me.

3 Q. 1052 is an e-mail dated May 15, 2009?

4 A. Correct.

5 Q. Do you see the Attachments field?

6 A. Yes.

7 Q. The attachment is -- the prefix of
8 each of the documents is G0814.70003 US00, correct?

9 A. Correct.

10 Q. This number is one higher than the
11 Docket number for the '358 application, correct?

12 A. Correct.

13 Q. Because the Docket number is one
14 higher, that means you docketed this after you
15 docketed the '358 application, correct?

16 A. After or at the same time. I
17 received multiple... yeah.

18 Q. Okay. If you turn to the second --
19 or sorry, the third page that ends in Bates 791 --

20 A. Yes.

21 Q. Do you see "Field of the Invention"?

22 A. Yes.

1 Q. It says: "This invention relates to
2 methods for increasing the sensitivity of nucleic
3 acid detection assays."

4 A. Yes.

5 Q. A moment ago we looked at Exhibit
6 1050 where the title of what Dr. Porreca sent you was
7 "method to increase the sensitivity of sample
8 isolation for DNA sequencing," yes?

9 A. Correct.

10 Q. Is the draft application in 1052,
11 Exhibit 1052, the application that represents what
12 Dr. Porreca sent you in Exhibit 1050?

13 A. I don't know. They relate to similar
14 subject matter. I don't know if it's...

15 Q. Do you recall working on the draft
16 application that's in Exhibit 1052?

17 A. I don't have a specific memory of it,
18 no. I recall working on applications for Good Start,
19 but I don't -- I don't remember this one separately
20 from the other ones.

21 Q. In the e-mail on the cover of 1052,
22 Dr. Young says: "Please notice Claim 9, which

1 includes the mutation detection reaction we
2 discussed."

3 Do you see that?

4 A. Correct, yes.

5 Q. Do you recall discussing a mutation
6 detection reaction?

7 A. No.

8 Q. Did you discuss the mutation
9 detection reaction with Dr. Porreca and Dr. Young?

10 A. I don't recall.

11 Q. You filed a PCT application
12 incorporating four provisional applications, and that
13 PCT turned into the '730?

14 A. Correct, yes.

15 Q. Do you know why you combined all four
16 provisionals into the same PCT application?

17 A. I don't remember the -- the reason we
18 did it for that one. I could speculate, but I don't
19 know.

20 Q. After filing the PCT application, a
21 different firm was hired to file the U.S. utility
22 applications; is that --

1 A. That's correct, yes.

2 Q. Do you know why you and Wolf
3 Greenfield did not file the utility applications?

4 MR. WUESTE: I'll caution the witness
5 not to disclose the substance of attorney-client
6 communications. I don't think this calls for it but
7 caution the witness.

8 A. I know that it occurred after a new
9 CEO was hired for the company, and it was transferred
10 to somebody that he had worked with before.

11 BY MR. BROUGHAN:

12 Q. You still work at Wolf Greenfield?

13 A. Correct.

14 Q. Does Dr. Young still work at Wolf
15 Greenfield?

16 A. Yes.

17 Q. You know Dr. Young still?

18 A. Yes.

19 Q. Do you still in contact with
20 Dr. Porreca?

21 A. Not regularly, no.

22 Q. Have you recently worked on any

1 patent applications for Dr. Porreca or whoever he
2 happened to be employed with?

3 A. No.

4 MR. BROUGHAN: We can pass the
5 witness at this time.

6 MR. WUESTE: No further questions at
7 this time.

8 MR. BROUGHAN: None from us either,
9 then.

10 THE VIDEOGRAPHER: All right. This
11 marks the end of the deposition of Patrick R.H.
12 Waller. We are going off the record. The time on
13 the monitor is 11:12 a.m.

14 MR. WUESTE: We would like a rough
15 and Monday delivery.

16 MR. BROUGHAN: Monday is fine.

17 (Deposition concluded at 11:12 a.m.)
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1 UNITED STATES PATENT AND TRADEMARK OFFICE
2 BEFORE THE PATENT TRIAL AND APPEAL BOARD

3 I, Jennifer L. Wielage, CCR No. 30X100191600,
4 Certified Court Reporter, and Notary Public within
5 and for the State of New York, do hereby certify:

6 That Patrick R. H. Waller, Ph.D., the
7 witness whose deposition is hereinbefore set forth,
8 was duly sworn by me before the commencement of such
9 deposition and that such deposition was taken before
10 me and is a true record of the testimony given by such
11 witness.

12 I further certify that the adverse party, Molecular
13 Loop Biosciences, Inc., was represented by Counsel at
14 the deposition.

15 I further certify that the deposition of Patrick
16 R. H. Waller, Ph.D. occurred at the the offices of
17 Desmarais, LLP at 230 Park Avenue 26th Floor,
18 New York, New York, on Friday, September 26, 2025,
19 commencing at 9:00 a.m. to 11:12 a.m.
20
21
22

1 That the testimony of the witness, the
2 questions propounded, and all objections and
3 statements made at the time of the examination were
4 recorded stenographically by me and were thereafter
5 transcribed;

6 That a review of the transcript by the
7 deponent was requested;

8 I further certify that I am not a relative or
9 employee of any attorney of the parties, nor
10 financially interested in the action.

11 I declare under penalty of perjury under the
12 laws of Patent Appeal Board that the foregoing is
13 true and correct.

14 Dated this 26th day of September 2025.

15
16 *Jennifer L. Wielage*

17
18 Jennifer L. Wielage, CCR, RPR, CRR

19
20
21
22

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