

UNITED STATES DISTRICT COURT
DISTRICT OF DELAWARE

10X GENOMICS, INC., et al.,. Case No. 1:22-cv-01117-JHS
Plaintiff, .
v. . U.S. Courthouse
601 Market Street
PARSE BIOSCIENCES, INC., . Philadelphia, PA 19106
Defendant. .
. November 22, 2022
. 10:41 a.m.

TRANSCRIPT OF MOTION HEARING
BEFORE HONORABLE JOEL H. SLOMSKY
UNITED STATES DISTRICT COURT JUDGE

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1 THE COURT: Please be seated. This is the case of
2 10X Genomics, Inc. and the Board of Trustees of the Leland
3 Stanford Junior University, Plaintiff, versus Parse
4 Biosciences, Inc. as Civil Action Number 22-1117. And this is
5 a case from the District of Delaware.

6 And on behalf of the Plaintiffs, we have Karen
7 Jacobs, Esq.

8 MS. JACOBS: Good morning, Your Honor.

9 THE COURT: Good morning, welcome. And Nicholas
10 Groombridge, Esq.

11 MR. GROOMBRIDGE: Good morning, Your Honor.

12 THE COURT: Good morning. And Jennifer Wu, Esq.

13 MS. WU: Good morning, Your Honor.

14 THE COURT: Good morning. And Josephine Young, Esq.

15 MS. YOUNG: Good morning, Your Honor.

16 THE COURT: Good morning. And on behalf of
17 Defendants we have Brian Farnan, Esq.

18 MR. FARNAN: Good morning.

19 THE COURT: Good morning. And Derek Walter, Esq.

20 MR. WALTER: Good morning.

21 THE COURT: Good morning, and Edward Reines, Esq.

22 MR. REINES: Good morning.

23 THE COURT: Good morning. Welcome, everyone. I just
24 want to bring one thing to your attention, more to Plaintiff's
25 Counsel. Let's see, I believe it's Mr. Groombridge, Wu -- and

1 Ms. Wu, and Ms. Young were admitted pro hac vice. And they
2 filed yesterday a notice of change of firm affiliation. And
3 that's all fine.

4 But when I look at the docket, it doesn't list the
5 three of you as counsel in the introduction on the docket. The
6 order I believe I signed granting pro hac vice admission is
7 entered on the docket.

8 I'm just wondering, is there something about Delaware
9 practice where you have to do something additional to get your
10 names on the docket and the introduction?

11 MR. GROOMBRIDGE: I certainly defer to Ms. Jacobs
12 about Delaware practice, but Ms. Jacobs --

13 THE COURT: Ms. Jacobs?

14 MS. JACOBS: Typically in Delaware --

15 (Simultaneous speaking)

16 THE COURT: By the way, everybody has to speak into a
17 microphone, and pull up the microphone if you can, everyone.

18 MS. JACOBS: Yes, Your Honor. Typically in Delaware
19 practice, the Delaware counsel who are listed in the initial
20 portion of the caption page and into the record will reflect
21 the pro hac vice admission of various counsel.

22 MS. JACOBS: Okay. And in our court, the minute I
23 enter an order admitting someone pro hac vice, the Clerk will
24 enter their name as counsel next to the Plaintiff's name. Is
25 it automatically done also in Delaware?

1 MS. JACOBS: That's a good question, Your Honor. I
2 know our practice is typically for Delaware Counsel to be
3 listed there. I don't know --

4 THE COURT: Okay.

5 MS. JACOBS: -- if it's an automatic thing.

6 THE COURT: All right. Anybody have an answer,
7 anyone else?

8 MR. FARNAN: In Delaware, it's up to the Clerk's
9 office. And sometimes they have everyone --

10 THE COURT: All right. I'll have my staff call the
11 Clerk's office then, and we'll find out why your names have not
12 been listed. All right.

13 MS. JACOBS: And Your Honor, we'd be happy to file a
14 notice of appeal and get that going.

15 THE COURT: No, I don't think you have to. I've
16 admitted your pro hac vice. So you're in the case. I don't
17 think Counsel should do anything else. It should be up to the
18 Clerk to get your names on the docket. And that's what I've
19 seen all the years I've been here.

20 All right. In any event, we're here today because
21 the Defendants, Parse Biosciences, Inc., have filed a motion to
22 dismiss the complaint. And that's Document Number 12 in the
23 record. The answering brief of the Plaintiff is Document 14.
24 We have a reply brief, Document 20.
25 The actual motion is Docket 11.

1 I have read the compliant, and we have six patents in
2 question. And it is physically impossible to read the entirety
3 of all six patents, at least for purposes of the motion to
4 dismiss.

5 But I did look at what I think is a representative
6 sample if you can help me in that regard. I looked at the 981
7 Patent and the 995 Patent. Obviously there's two groups of
8 three here. And maybe at some point you can explain to me,
9 even though it's in the papers, the real difference between
10 them.

11 And I'm assuming that, and I'll hear from Defense
12 Counsel first, that the motion to dismiss appears to apply or
13 appears to group the three patents in what are referred to, at
14 least by Defense Counsel, as the Buenrostro B-U-E-N-R-O-S-T-R-
15 O, Patents. That's the 995, 207, and the 357 Patent.

16 And the second group would be the Sydney Brenner
17 patents. These are the inventors. The 981 Patent, the 013
18 Patent, and the 197 Patent.

19 And, I guess, so Complainant's Counsel doesn't jump
20 out of their seat, so to speak, the first patent they refer to
21 as the Jerizi Patents, the first series of three, you know,
22 contesting, I guess, whether or not Buenrostro was the first
23 inventor. So, in any event, let me hear from Defense Counsel.

24 MR. REINES: Thank you, Your Honor.

25 THE COURT: And I have read the documents I've

1 referred to.

2 MR. REINES: Much appreciated. Your Honor, first I'd
3 like to hand up two documents.

4 And this is Edward Reines from Weil Gotshal on behalf
5 of the Defendant. And, Your Honor, the reason I hand out the
6 slide deck, other than that is, sort of, the Patent bar, you
7 know, convention to use them. But the reason, in part, is
8 because of this complex technology, a picture tells 1,000
9 words.

10 So I'm going to try to simplify the technology and
11 explain it, and this will certainly be a help with that. The
12 first thing I'd like to note in this, I'm going to be going
13 through this, is we're applying the Alice test, which is a
14 three-part test, two-step test. That's on Page 2.

15 And in Step 1 are the Claims directed to a Patent
16 ineligible concept, easier to say then it is applied, but it's
17 very too easy to say, which is are claims in the patent
18 directed to the patent ineligible concept.

19 And then if they are, is there an additional
20 inventive concept here, you know, that's been adequately
21 flagged in light of the patents being part of the pleading,
22 okay.

23 And in this case, you know, Slide 3 says the Claim's
24 focus must be something other than the abstract idea. So the
25 focus can't be an abstract idea.

1 And what you need to look at, and this is Slide 4,
2 and it's important, is that when you determine what the claims
3 are addressing, you have to consider the claim's advantages of
4 the patent.

5 THE COURT: All right. My sense from reading
6 everything is that we're dealing more with, I guess, a natural
7 phenomenon or perhaps the law of nature rather than an abstract
8 idea.

9 MR. REINES: Well actually, in this case, one set of
10 patents it's the natural phenomenon. So you're right about
11 that one Rowstow (phonetic).

12 THE COURT: Well, you're right. The other, the last
13 three are abstract.

14 MR. REINES: We're giving you two different pieces of
15 it.

16 THE COURT: Okay.

17 MR. REINES: I don't think the application of that
18 would lead to too much complexity.

19 THE COURT: Okay.

20 MR. REINES: Now turn to Slide 7. You know, one of
21 the lead positions of 10X is that it's not an efficient use of
22 the Court's time to address it.

23 With that, I think the first thing I want to do is
24 cite a brief submitted by 10X quite recently in Delaware. It's
25 in the record. It's Document 13-5. And let me just read a

1 little bit of that, because I think it totally fits in with
2 what their position is here.

3 The patentability under 35 U.S. Section 101 is a
4 threshold legal issue. And for that they cite The Bilsky case.

5 And they state that patent eligibility has in many cases been
6 resolved by motions to dismiss, citing a well-known federal
7 circuit case Berkheimer.

8 They say the face of the patent shows that it's not
9 directly the patent eligible subject matter. The 101 inquiries
10 properly raise the pleading stage.

11 And then -- and I won't read this in for the sake of
12 everybody, but this Court has repeatedly granted motions to
13 dismiss based on 101, and that's this Court referring to the
14 District of Delaware, and then a laundry list of cases that I
15 will spare everybody. But we have the reference. It's
16 Document 13-5 at Page 10.

17 So the patent becomes part of the pleading, as the
18 Court knows well. It's the reference in attachment to the
19 complaint. There's very little, precious little, in the patent
20 complaint, which you would expect, that pleads an inventive
21 advance or how the claims are directed. I know Your Honor read
22 the plea, but you won't see adequate pleading to address these
23 issues in there, okay.

24 We're going to lead, actually, with the Brenner
25 Patent, this at eight. We were outlining that, you're right,

1 that we grouped three of the Brenner patents and three of the
2 Buenrostro patents.

3 And Your Honor's instinct to only read the 981 patent
4 was a good instinct. Because the actual text of the patent is
5 identical to the three Brenner patents. The same would be --
6 it would be foolhardy to read the different patents. Because
7 once you've read one or, well, perused one, frankly I don't
8 think the Delaware Judge would just read them beginning to end
9 anyway. The parties are responsible for admitting or showing
10 you what's relevant but not just anything.

11 And then what changes are to the claims at the end,
12 the claims at the end of the patent state what the right is.
13 And patent attorneys are famed for taking one patent
14 application and then spinning it out as multiple patents and
15 multiple claims. Because they want as many different bites of
16 the apple as they can get.

17 And that's what the different claims are, different
18 attempts to state what their right is. And so by multiplying
19 it out, they get more claims. The subject matter is
20 essentially the same. And the patent, in terms of the
21 description of the invention, is identical, okay.

22 So I'm going to start with the Brenner patent. And
23 we're going to do a little bit of a tutorial. I'm going to
24 only state what you need to know. And I wouldn't be, you know,
25 it's a little imposing for anybody getting through technology,

1 but I'm confident, based on all the good things that I've heard
2 from you, that this will be within your competency to level out
3 what we need to know today.

4 On Slide 10, and this is going to really be helpful
5 to look at, DNA is a type of nucleic acid. It's the main one,
6 because it's the basis for life, okay.

7 There are four building blocks. And you see them
8 there, red is, it's tiny, but every one is referred to by the
9 first letter T. Blue is C., thiamine, yellow is A, and green
10 is G. All you need to know is TCAG, and it's just a long
11 billion length code like a string of pearls. And it's A, C, T,
12 T, T, T, T, T, T, that's it, just a code using four different
13 chemicals with these names. Everyone uses the first initial,
14 and it's just a chain, like a pearl chain.

15 You see on the right it's saying helix, but the way
16 everyone works with the DNA it becomes just like one long
17 thread, okay. So that's what you need to know. We're talking
18 about a DNA chain, like a pearl chain that's just TCAG, and it
19 can be anything.

20 All right. Now the next slide is short-read
21 sequencing. And that's what we're talking about, that the
22 patent talks about, okay. You have the long strand of DNA.
23 Can you see that? And they break it up, because a billion-
24 long is just too long. And you get these fragments.

25 And then what's shown on the right, the short-read,

1 is just examples of just short-reads, those four letters. And
2 each line, each row is a different short-read. So short-read
3 sequencing, you break up the very long DNA chain into little
4 pieces, and then you have what the code is for that piece.
5 That's what this says.

6 Now here's the problem that the Brenner Patent
7 addressed on Page 12.

8 THE COURT: Let me just ask one question.

9 MR. REINES: Sure, of course.

10 THE COURT: On Page 11, what does it mean, fragment
11 DNA? Is that the breaking up of the --

12 MR. REINES: Just breaking it up.

13 THE COURT: Okay.

14 MR. REINES: You have, like, a long chain. It's a
15 billion-long or plus. So you can't work with that. They break
16 it up, and then you can sequence each one, it goes in a
17 sequence, so we need to know how that works, and then you have
18 these short-reads that come out. Okay?

19 THE COURT: Okay.

20 MR. REINES: Now here's -- and the patent just said,
21 in words that all of us can understand, the problem that the
22 Brenner Patent addressed is this. If you have a long piece of
23 DNA, let's say the fragment is, what, about 30 or 40 bases
24 long, we called the bases, ACTG. They're just one after the
25 other in a line.

1 THE COURT: Brenner or the abstract? We're dealing
2 with the abstract concepts?

3 MR. REINES: It's in Brenner. I gave you the 981
4 Patent so that you can look at it, and there I give you, I
5 believe it's a tabbed to the front of it where it supports the
6 background of the invention.

7 THE COURT: Okay.

8 MR. REINES: All right.

9 THE WITNESS: Yes.

10 MR. REINES: And it's got the background of the
11 invention, and then it goes on to discovery of the invention.
12 It talks about the limitations of current sequencing, and
13 that's this problem here, short-read -- the short-read problem.

14 So the problem with the short-read is, you've got a
15 longer DNA sequence of 40, but you can only, let's say, decode
16 20 at a time, because you're using a short-read sequencing
17 technique which is what the common technique was, that's being
18 critiqued here. Then you have the missing information you
19 don't know.

20 So how do you deal with if you have longer DNA
21 sequencing within the short-read? And here, on Page 13, we
22 walk you through, by referencing the Brenner Patent, the
23 alleged invention overcomes short-read problems.

24 And it just says it in language that we can all
25 understand, the fragments in the regions of interest of the

1 genome are longer in the length that can be sequenced by a
2 particular technology, then said fragments will not be fully
3 analyzed. That's what I showed you in the last slide where
4 half of it's just question marks and half of it's a code.

5 The present invention removes the limitations imposed
6 by current sequencing and new technology. And this is in
7 Column 1 under background of the invention. It's only a
8 paragraph -- it's two paragraphs, but it's very short. All
9 right, so that was the problem, that was the solution.

10 Now here's the rub. And this gets you almost 50
11 percent of the way, I think, reaching the right results on the
12 Brenner Patent. The summary of the invention is mercifully
13 short. You probably looked at this and said, they want me to
14 read all this? It's unrealistic for anybody. Summary of the
15 invention is what, three sentences or something, one paragraph,
16 okay.

17 And that's obviously in an important section, and I'm
18 going to tell you what it was. All that section talks about is
19 this reflex process, a reflex method, reflex process. So the
20 patent is about the reflex method solving the short-read
21 problem.

22 You have the background of the invention that tells
23 you that, likewise shows that, then you have the summary of the
24 invention. Reflex is mentioned 250 times in the patent. This
25 is a reflex patent or should have been.

1 Now the next slide is Slide 15 and, again, I promise
2 you that the technology is complicated, but it should be within
3 your grasp. This is the reflex method. It is an extremely
4 complicated method about moving parts of DNA to different
5 locations with this reflex method.

6 This is not what this motion's about, because this is
7 not what their patent claims were. The patent claims go in,
8 you file the application, and then work with the examiner over
9 many years, and the claims board, and the applicant tries to
10 get what they can out of it.

11 They didn't want to get the reflex method. They
12 wanted to get something else. And the patent examiner is not
13 an attorney who'll let them. And it's different than what the
14 summary of the invention is, which is about the short-read
15 problem and the summary of the invention using this complex
16 reflex method that we don't have to worry about, okay.

17 So then you're going to ask, all right, well, what
18 are the claims that they got out of the patent office that
19 you're saying deviate from what the actual invention is that's
20 described in the patent? Answer, Page 16.

21 And again, this is well within your grasp. The DNA
22 from Sample 1 matched up a code, like I told you, the Board
23 letter, that really doesn't matter what they say. The idea is
24 this concept of tagging which is you take DNA, let's say you
25 have multiple patients. A lot of them are seen for cancer,

1 that's what a lot of this is about, multiple patients. But you
2 want to pool that all together and get sequenced at once.
3 Because the sequencing is expensive, but you can do a lot at
4 once.

5 You might want to know which came from which
6 patient or which came from which sample, or which came which
7 cell. What you would do is you would attach a code or a tag of
8 just four of the same letters, that are artificial, and put it
9 on the end, like a zip code or like a tag.

10 And that is what you do. So if you have something
11 from Sample 1, maybe Patient 1, just as an example, you might
12 but ACTG, and then if you see ACTG you know what you've got.
13 And if you've got Sample 2 you've got CGTF.

14 THE COURT: Is this what you're referring to as
15 tagmentation?

16 MR. REINES: No. That's the other patent. It's
17 related, because that has tagging too. But tagmentation is the
18 Buenrostro Patent. Brenner is simpler. That's why we're
19 starting with that.

20 And I understand your confusion here, because we
21 started with Brenner, where the briefing is the other way. But
22 I think this is the best way to do it at this point.

23 So it's just a matter of putting -- it's not hard.
24 You put artificial DNA with that code of four on there. And if
25 you look at the DNA, if you sequence it, and it has ATCG at the

1 end, you know it's from Sample 1. If it's got CGTA at the end
2 of it, you know it's from Sample 2, like a zip code. You put
3 it on, you know where it came from.

4 And the next Page, 17, shows the cell with DNA. And
5 then you just put the tag, and they all -- the first tag
6 identifies the cell. So we have a lot of cells in our bodies.

7 We want to get all the DNA from one cell and know where it
8 came from. You can just do that tag. And you can say, okay,
9 that was from Cell 1, because it's got ATCG. And that's just
10 the first tag to identify the cell.

11 And then the second tag is to identify this
12 individual piece of DNA. Because once it goes into sequencing,
13 you might lose track. So you say this is in Cell 1, and this
14 is, you know, the first, second, or third piece of DNA from
15 Cell 1.

16 It's a good analogy when you're at the dry cleaners.

17 They may tag you first, one tag they may put on there with a
18 numerical code, which is no different than ATCG, and say this
19 is the Slomsky customer. And then the second tag may say this
20 is a shirt from him. And then you put the two together, and
21 you have a Slomsky shirt. That's it.

22 Put in an artificial piece of DNA on the end, and it
23 really is not too much more voodoo than that. And I don't know
24 that there's going to be a big dispute from the parties on that
25 either.

1 So if you go to Page 21, this kind of captures it
2 all. You have the DNA you're interested in green. Are you at
3 21?

4 THE COURT: Yes.

5 MR. REINES: Great. The green is the sample DNA.
6 That's the DNA you're interested in. You want to know what the
7 code is. It's important if you're working with it. Then you
8 put the tag to know which cell it's from. One's from a yellow
9 cell, one's from a red cell, one's from the blue, you know,
10 that's just the way it is for purposes of explanation, and then
11 a molecule tag, which tells you which molecule is in the cell.

12 And so it's got two tags on it at the end. So at the
13 end when you look at the bottom, you see those tags at the end,
14 at the end location. You know, you can figure out, okay, this
15 DNA I now know the code. Because it went through the
16 sequencer. It was from, take the top one there, Cell TAGA, and
17 Molecule TAGA.

18 THE COURT: What does the sequencer do?

19 MR. REINES: What's that?

20 THE COURT: What does the sequencer do?

21 MR. REINES: Everything. The sequence of the DNA to
22 the left, the green, is your body. That is why you have brown
23 eyes, or blue eyes. That's why I'm getting a little bald.
24 That's why.

25 THE COURT: I guess my question is it's a sequencing,

1 it looks like a machine.

2 MR. REINES: Yeah, that's just a machine. That takes
3 the DNA strand, like the pearls, the naked eye wouldn't tell
4 you what it is. And then it says it's the cytosine. I mean,
5 what is it? And then spits out, like a computer, just spits
6 out what you see below.

7 So you start with -- the top is like literal,
8 physical nucleic acid, minute but from your body, with these
9 little pieces that have been added on chemically. So the top's
10 the chemical, and the bottom is the information. Okay. That's
11 what you need to know, ha, ha, ha.

12 So turning to Slide 22, tagging is not the invention.
13 They tried to make the claims read on that for their own
14 commercial reasons. They don't have anything about the reflex
15 method, that super complicated Figure 1 thing that we didn't
16 even want to look at, that I could still be talking about.

17 As you see, the first sentence of the background of
18 the invention, since we've previously described methods that
19 enable tagging to each of a population of fragmented genomes
20 embodying the creative population library. So I'm saying
21 tagging was old, our summary of our invention is the reflex
22 method.

23 Now the claim, which is what matters in terms of the
24 rights, and this is on 23, again, you don't need to read every
25 single claim. There's probably no Judge that's reading every

1 single claim like it's part of, you know, they're prepped.

2 A first tag sequence associated with a single cell
3 for tagging, the sequence being ATCG, TGCT, whatever it is, and
4 then a second tag sequence distinguishing the DNA within the
5 cell, so it's that concept that I showed you. And again, I
6 don't think there'll be dispute about this.

7 Now in the good part while we brought this motion in
8 or component in is, if you look at Slide 24, the Brenner
9 Patents were asserted before in a case called -- against a
10 company called Selsi in Delaware. The case settled, it's not
11 active.

12 10X described their own claims, including the 981,
13 directed to tagging sample polynucleotide within the
14 polynucleotide comprising tag sequences. One specific to the
15 cell of origin and one specific to the polynucleotide of
16 origin. Polynucleotide is just a generic way of saying DNA.
17 DNA's the species, polynucleotide's a generic.

18 So they themselves are saying the two steps of
19 tagging. And, again, so I don't think there's going to be a
20 tussle about the technology. Because it's almost that simple.

21 They may try to make it a little more complicated, but I think
22 at heart they're going to agree that what it is.

23 All right. Let's go to Slide 26. We're now going to
24 apply the Alice test to the Brenner Patent. And in 26 they've
25 answered the question for you. The Brenner method claims are

1 directed to tagging samples with polynucleotide with two tag
2 sequences. One tells you the origin point of the cell, and the
3 other tells you what's the polynucleotide origin.

4 So it's adding those two little tags at the end like
5 a dry clearer might. And they admit that the claims are
6 directed to tagging which is the Inco (phonetic) rate. If you
7 go back a slide, you'll see, oh, I mean, it was at the
8 beginning I did it.

9 But the question is, Step 1 is are the claims
10 directed to something abstract. Our assertion is this two-step
11 tagging is an abstract concept. People have been tagging
12 things at dry cleaners and everywhere else for immemorial. So
13 that's our assertion as to what's abstract. And they agree,
14 this is on 27 --

15 THE COURT: What about in the context of DNA?

16 MR. REINES: Good question. And that's at Slide 27.

17 I anticipated your question. Slide 27 answers that. And it's
18 the right question, by the way. 10X was in the case against a
19 patent which was remarkably similar from the same year, Becton
20 Dickinson, I bet you've heard of them. This is they were
21 moving to dismiss 11 patents, so it's not an unusual thing on
22 the grounds in 101, and seven patents in what they call the
23 Fodor Patent.

24 And what they criticized the Fodor family, and they
25 moved under the same Section 101, for the same relief we're

1 asking for, different patent, but their argument was that the
2 claim, in varied form, each claim in varied form, the abstract
3 idea of labeling different DNA molecules with different labels.

4 This is what they said not long ago.

5 And if we just march through here at 28, they say
6 Claim 6 of the 358 patent is making the directive that the
7 abstract idea of labeling different objects, two or more
8 nucleic acid molecules, DNA nucleic acid, with different
9 labeling. So they're making exactly the argument that we're
10 making. They made it first. Settled, you don't have the
11 outcome, but this is what 10X said was the law.

12 And they go on in 29. 10X said, easily
13 distinguishing between similar objects, well understood
14 benefits that humans have realized from using different labels
15 to label different objects for centuries, the Fodor claims are
16 directed to an ineligible abstract idea.

17 We go on to the next page. It's just acres of it,
18 making all arguments. And this is, I think --

19 THE COURT: Are they talking about the Fodor claims
20 or are they talking about their own --

21 MR. REINES: The claims are remarkably similar, yes.
22 It's unbelievable.

23 THE COURT: Are they talking about their own patents,
24 the ones at issue in this case?

25 MR. REINES: They're talking about the Fodor patents.

1 But the patents -- it's just either a coincidence or that's
2 what people were trying to do, or there's some explanation.
3 But in the same year of 2009, both groups filed patents.

4 Now, the difference is, and I think I showed this
5 already, the Brenner Patents weren't intended to be about this
6 labeling. This labeling has become important, but that wasn't
7 -- these were about the reflex method.

8 We looked at the summary of invention. They've got a
9 paragraph, the word label isn't in there. All it talks about
10 is this reflex method which is has been booted out of the
11 claims. They changed the claims and directions, because
12 commercially they want to try to capture people like Parse that
13 are making cancer diagnostics.

14 So Page 30, 10X goes on. The abstract idea of
15 labeling different objects with different labels is as old as
16 the scientific method. And then they give the Dewey Decimal
17 System, all the different ways we all know that labeling has
18 become routine over mankind. All right.

19 Now I think I have it in these materials, but I'll
20 say to you there's case law that says just because you limit an
21 abstract idea to an area of technology, that doesn't get you
22 out it being abstract.

23 Because otherwise, someone could own tagging in this
24 way for all of DNA. And that's an abstract and rejected by the
25 Court. So 31 said the claim focus must be something other than

1 the abstract idea. Claim focus here is on this two-stage
2 tagging. I'd be surprised if the other side doesn't agree with
3 that.

4 THE COURT: Let me ask a question.

5 MR. REINES: Sure, of course.

6 THE COURT: I believe they cite a case that stands
7 for the proposition that you can use an abstract idea, or you
8 can use a natural phenomenon in creating something else, and
9 gave the example of gravity. Is that being done here?

10 MR. REINES: That just seconds that. Again, your
11 instincts are good. That just seconds that, which is, is there
12 something additional beyond the abstract idea that's in the
13 invention. Is there an additional inventive advance. That's
14 in Step 2. And I'll get to that.

15 We're at Step 1, and the question is are the claims
16 in the Brenner Patent directed to this labeling. I think
17 that's going to be undisputed. We'll see. And is that
18 abstract? Well, we have 10X going for pages and pages today on
19 how abstract it is in the Fodor claim.

20 THE COURT: Okay.

21 MR. REINES: So that's Step 1. I promise I will get
22 Step 2.

23 So 10X's position is will the Patent Office allow the
24 claim. That's at 32. And the Federal Circuit's been clear,
25 because this area of Section 101 has been, you know, the

1 subject of recent Supreme Court law. Office guidance is not
2 itself the law of patentability, patent eligibility, that's at
3 33, does not carry the force of law, and is not binding.

4 And that's why so many patents have been invalidated.

5 The list that 10X gave of all the cases in Delaware where
6 they've been invalidated shows you that just because the Patent
7 Office granted it, that it should be an administrative decision
8 that we're testing here. We're entitled to that here.

9 And this is on Page 34, the Uniloc case, the mere
10 allowance of claims during prosecution does not preclude
11 dismissal, okay.

12 So where we are is 10X says, I think the parties are
13 going to agree that the claims are limited to tagging. Their
14 argument is going to be of tagging twice. And we're going to
15 argue so what. And that may be the only decision Your Honor
16 has to make, is whether tagging twice is a significant
17 difference rather than tagging once.

18 And then the question, is that abstract, there are
19 the ones that have insisted that it's abstract when referring
20 to the Fodor claim.

21 And I think they're correct as this, you know, the
22 record in this case shows that just putting tags on the
23 different DNA in order to know where it came from is as old as
24 the hills. In general, applied to DNA, just because you limit
25 to a technology area doesn't make it not abstract.

1 But then you're right. There's a Step 2. You're
2 right. I mean, we're in sync because, as you asked the
3 question, that's, you know, at least our position on it.

4 At 36 we claim tagging is not an invented concept.
5 Again, we have the 10X brief. And it says BD failed to
6 identify any improvement other than the use of different labels
7 to label the different instances of the target molecules in
8 DNA.

9 This is the same improvement humans have recognized
10 from the application of that same abstract idea in context with
11 other DNA for centuries when trying to distinguish between
12 multiple instances of similar objects, okay.

13 So they've acknowledged how old this is and that it's
14 just an abstract idea. Now something that's important is on
15 37. There's a reference to language that says, basically,
16 unless we tell you otherwise, unless we notate this invention
17 uses conventional techniques, and you can read it for yourself
18 on 37 and see what it says.

19 And the point here is that when they're describing
20 the invention, Your Honor, it's this reflex method. They're
21 going to come up and tell you, well, the focus is about using
22 two labels. So it may be one label is abstract and invalid,
23 because we said that against BD and we can't really say
24 otherwise.

25 But tooling, now we're talking invention. That's

1 what I think the argument's going to be, is to focus you on
2 what I think you're going to hear later. But they never --
3 this patent is bereft of any place where it's going to tell you
4 that tagging is what they considered and invention.

5 In fact, as I explained at the outset, the background
6 of the invention says previously we described methods that
7 enable tagging of the population, and they go on. That's the
8 background. Then it says our new solution is the reflex
9 method.

10 THE COURT: What if, for the sake of the argument,
11 they came up with a third identa tag, and a fourth identa tag?
12 When do you get to the point where it's no longer
13 conventional?

14 MR. REINES: That's another good question and a very
15 fair one. We don't have that problem here. Not because
16 they're not claiming that, but the patent doesn't say that even
17 two is innovative.

18 In other words, if someone wrote a patent up, maybe
19 Fodor or somebody, and said we're going to talk about all this
20 tagging, we're going to tag cells, we're going to tag this,
21 we're going to tag that, we're going to do back flips, then
22 we're going to tag some more, that's our invention, we wouldn't
23 be here. Because the patent and the pleading would be showing
24 an invention, at last a sense of it.

25 The problem here is there's nowhere in the patent

1 invention description, which they're responsible for putting
2 forward, they're not going to shirk that, that says that
3 anything about this tagging is innovative.

4 And to cut to the chase, which I know Your Honor
5 likes to do, when I tabbed the patent for this they identified
6 where they identified it. The closing statement of that is in
7 embedded at Column 6.

8 THE COURT: Which page?

9 MR. REINES: It's Column 6, I red tabbed it with --
10 the patent said to work by columns. So if you look at --

11 THE COURT: Column 6.

12 MR. REINES: Yeah. The second tab, I think, there is
13 going to be Column 6. It's at the top.

14 THE COURT: They've highlighted multiplex identifier.

15 MR. REINES: Exactly. And that is where they argue,
16 it's about 32, though it's hard to tell, the line numbers are
17 in the middle when you're reading the patent.

18 It's a definition, Your Honor. This is the part of
19 the patent that has definitions. See, up on top of it at 15,
20 the ligation's defined. At one, see the word kit's defined.
21 This is just definitions. And they cite the definition of this
22 MID.

23 But the summary of the invention is clear that the
24 reflex method is the invention. And that's it. You don't need
25 to go home and read six patents from cover to cover. They're

1 responsible for showing you where they possibly say this is an
2 invention. And they're sending you to Column 6 to a definition
3 of a term.

4 The background of the invention describes we
5 explained in past the new tagging. And the summary of the
6 invention says nothing about double tagging being the
7 invention. Every single statement of it is the reflex method.

8 Every single statement in there makes clear you have to be
9 using the reflex method in order to using the invention.

10 Clever lawyers, or non-clever lawyers, famous
11 lawyers, whatever, changed the claims away from that. So to
12 your question, which was a good one, what about if you're doing
13 tagging, and back flips, and flips, and whatever, we don't have
14 that here. Because that patent will would have to be saying
15 our invention is a great new tagging method, not two, not one,
16 seven, 12, 15, whatever it is.

17 This patent is a reflex method. So they don't have
18 anywhere in this patent to show you that this double tagging,
19 which is the subject of the claim, is inventive.

20 Therefore, they lose on Step 2 and the patent's
21 invalid. Because they admit that the tagging concept of DNA is
22 an abstract idea that's ineligible subject matter. And that's
23 what the claims are directed to. I showed it to you in
24 statements of four words where that failed.

25 So looking at 37, it says everything's conventional

1 in here unless we say otherwise. Well, they didn't say
2 otherwise in the tagging. Because they're so busy with the
3 reflex method.

4 And then 38 is the CareDx case which has very similar
5 language. They said you can't rely on the specific laboratory
6 technique. This is at DNA, Page 2. You can't rely on the
7 specific laboratory steps to get you out of the state of the
8 invention beyond the abstract idea where it says unless
9 otherwise indicated as conventional. And you haven't shown
10 anywhere "unless otherwise" was indicated. That's what CareDx
11 stands for.

12 Now, Your Honor would ask the logical question that
13 anyone that doesn't live with patent cases asks why do we have
14 three patents, why do we have five claims, ten claims at the
15 bottom? They're just different bites at the apple of trying to
16 state what their right is.

17 But the important point in Slide 39 is that it's
18 generic, routine, well-known laboratory techniques, fits in
19 their BD brief, attaching, hybridizing, amplifying, detecting,
20 sequencing, all those things that are not the invention, and
21 then we map specific claims.

22 I'm not going to go through each one, but in their
23 Becton Dickinson case they said all the other things that you
24 do with DNA as part of a routine or conventional approach, and
25 that's often what patents look like if the independent claims

1 remain standard, and then they add one little step. And often
2 the one little step isn't the invention, it's just another
3 tweak of what you can do with the main invention.

4 And this goes through and shows that all these
5 different additional laboratory techniques that just get added
6 on to the two-step labeling are conventional and are not the
7 invention. And it just flows through that.

8 THE COURT: So just help me with one thing here.

9 MR. REINES: Sure.

10 THE COURT: Are you just attacking Claim 1?

11 MR. REINES: This is all the claims.

12 THE COURT: All the claims.

13 MR. REINES: And one of the -- right, so let me --

14 THE COURT: It goes to methods of Claim 1.

15 MR. REINES: Let's talk about that for a second,
16 because this isn't intuitive. And I don't like when people
17 talk to me and they assume I know things that there's no reason
18 I should know. If you don't mind turning to the last page of
19 the patent.

20 THE COURT: I'm at it.

21 MR. REINES: Okay, great. So it's Claim 1, and
22 that's a method. And then A is a step, B is a step, C is a
23 step, D is a step, E is a step. They're going to tell you that
24 the invention is this. They're going to say the patent as a
25 whole.

1 But when you're asking them, okay, what's the
2 inventive concept, is it part of this analysis? They're going
3 to probably point you to this D, two little Is, one and two,
4 which is the first tag sequence and the second tag sequence,
5 just tagging. And I went and got already. Why that's true,
6 okay.

7 That claim it's like a checklist. That's how you
8 determine whether a claim's infringed or invalid. If you go
9 through and say, okay, is Step 1 done, check. Then you say,
10 okay, claim steps checked or not checked, and you go through
11 that. And if you've done all those steps that's the method of
12 Claim 1.

13 There's something called dependent claims. And I
14 don't know if anyone has done this for you, but I'm going to do
15 it now. I teach this patent litigation class at Berkeley, and
16 I have for 20 years. So maybe if I fall into that, I
17 apologize. But Step 2 is you take the method of Claim 1, and
18 then you do one more thing. So all of the steps of Claim 1 are
19 -- in order to use the method of Claim 2 you need to do
20 everything from Step 1. So that's Claim 1.

21 And the same thing for Step 3. Let's look at Step 3.
22 It's the method of Claim 1 when your sample polynucleotide is
23 selected from either DNA or RNA. So it's just like, okay,
24 using DNA for Claim 1 would be Claim 3. It's just taking the
25 basic invention of what you say you have in this case, which is

1 the double tagging, and then adding one thing. And most of
2 these adds are not the invention. The invention isn't doing
3 this as DNA. The invention is the double tagging of
4 polynucleotide.

5 And then Claim 5 is doing this where, in the tag
6 polynucleotides are generated would be one ligation reaction.
7 They're not going to tell you that it's the ligation they've
8 invented. So it's just adding one thing.

9 So that's why you have the small duplicity of claims.

10 In the 981, there's really what we call an independent claim,
11 Claim 1, which is really what the focus of everyone here has
12 talked about. And then there are these dependent claims which
13 just fall off when you add one step to Claim 1. So it's Claim
14 1 plus what's in Claim 2, Claim 1 plus what's in Claim 3, and
15 so forth.

16 So the fact of the multiplicity shouldn't confuse
17 you. And to make the point, when 10X, very recently in
18 Delaware, and this is all on the record, moved, by a motion to
19 dismiss under 101 against the Fodor Patent, there were seven
20 patents. And they grouped them all together. They had no
21 problem saying they're all about tagging, they're all invalid.

22 And that's the theory, right.

23 Just because they did it doesn't make it right. But
24 in fact, it's true, because they also said, as you'll remember,
25 the 981 patent, the method claims, because they're all methods,

1 are all directed to labeling. So they grouped them all
2 together.

3 I showed you this slide. We can go back but no
4 need, that they were willing, when they were describing their
5 own -- in the -- this is the Selsi (phonetic) case, their own
6 Brenner Patent, they were willing to say all of the method
7 claims of the three patents are all directed to this double
8 tagging method, okay.

9 I think that's what I have on this, unless there's
10 questions. My suggestion to Your Honor, because we get
11 confused between Buenrostro or Brenner, which one are you
12 talking about, is that we hear from my friends on the Brenner
13 Patent, and then we do a round on the Buenrostro, so we know
14 what we're talking about. But they're addressed in what I
15 said. I don't know if that's acceptable.

16 THE COURT: Well, just give me the, what I'll call
17 them, the Cliff notes in response to the question of the
18 relation of the 013 and 197 to your arguments.

19 MR. REINES: Yes. They're just, but the patents, I
20 have it as the 459, but the three Brenner patents --

21 THE COURT: When you say 459, I have 981, 013 --

22 MR. REINES: Yeah, you're right.

23 THE WITNESS: -- and 197.

24 MR. REINES: Yes. Everything I said pertains to
25 them, because the text is the same. Helpfully 10X said let's

1 use the 981, which I handed up to you, so you have a physical
2 copy of it to be helpful, has been exemplary. Because they're
3 the same.

4 So sometimes the pagination is a little different,
5 because some of the administrative information on the front was
6 different. But the text of the patent was the same, the
7 description of the invention and everything. So both sides are
8 using the 981 patent. We don't need to look at the other
9 patents.

10 The only time you need to look at the other patent is
11 for the claims, okay. But the claims are very similar. It's
12 the same Tag 1 is tagged twice, we think that's an invention to
13 this nDNA and you're doing it twice.

14 THE COURT: So why get the other two patents?

15 MR. REINES: Because patent attorneys like to have a
16 slightly different language. I don't have a better answer.

17 THE COURT: Okay.

18 MR. REINES: Everyone's comfortable grouping them,
19 that's what they did in the briefing, that's what we did. And
20 by the way, on the briefing one thing I want to comment is, for
21 example, in their opposition on Brenner to the Step 2, is there
22 an inventive concept?

23 In the conversation we were having, you asked me was
24 there something more than the abstract idea. They have, like,
25 a page of total argument on it that I just briefly looked at.

1 They don't have a lot to say. Because the patent was directed
2 to the reflex method.

3 THE WITNESS: What page?

4 MR. REINES: But that's true for all three.

5 THE COURT: Can you tell me what page in their brief?

6 MR. REINES: Yes. I have the example.

7 THE COURT: You said the page is superficial.

8 MR. REINES: Yeah. It is, I think it's right at the
9 end, actually.

10 MR. GROOMBRIDGE: I think, Your Honor, he's referring
11 to Page 18 of --

12 MR. REINES: No, I am not. It's Page 20, the Step 2,
13 the inventive concept. The claims including the inventive
14 concept start at the very, very bottom. It is half a line on
15 Page 19 and then Page 20, one page of argument on what their
16 main concept is. And there's a Step 2 of the Alice test.

17 THE COURT: Okay.

18 MR. REINES: All right. So if Mr. Groombridge is
19 amenable, we'll have the argument on Brenner.

20 MR. GROOMBRIDGE: Your Honor, I do think, as much as
21 we disagree on, we agree on this.

22 MR. REINES: Okay.

23 THE WITNESS: All right. I'll defer to Counsel. Mr.
24 Groombridge?

25 MR. GROOMBRIDGE: Thank you, Your Honor. And thank

1 you for taking up a case where we have all this great gob of
2 congestion. And we certainly appreciate that the Court is
3 willing to do that.

4 So I thought I would begin by just stepping back a
5 little and talking about the technology and why we're all here.

6 Because it's easy for the lawyers to get down in the weeds.
7 And with the best thought in the world, we tend to do that,
8 because we live and breathe this stuff. But it might be better
9 to zoom out some.

10 So 10X is a company that works in the field of
11 genomics. And genomics means understanding what's going on
12 genetically, usually inside cells. And particularly what 10X
13 focuses on is analyzing single cells. And that's a term that
14 we see in the claims of each of the Brenner Patents. And I
15 would like to just talk about why does that matter.

16 So before 10X really got going in this field, it
17 began as startup and has grown to be a bigger company. But
18 before it arrived, DNA sequencing began on things like the
19 Human Genome Project that we've done.

20 But in the context of what was happening there was we
21 were getting kind of an average. In other words, when we saw
22 Mr. Reines' slides about DNA and chopping it up into pieces,
23 and running it through a machine called a sequencer, and
24 getting what you get out, the way that used to be done was you
25 would take a sample. And you would grind it up and, I think

1 usually, I think they use a high-frequency sample. You could
2 put it in something like a blender and chop it up into those
3 little pieces and you're on or off about fragmenting.

4 And then, so you would run it through that machine,
5 the sequencer, and what you would get out would be a long
6 string of As, and Gs, and Cs, and Ts. But, and here's the but,
7 that would be an average. And because it's an average it would
8 lose a whole lot of information that turns out to be vitally
9 important, because you're trying to understand cancer, for
10 example.

11 And let me tweak that out a little bit. If you
12 imagine someone, a researcher who's looking at cancer, or a
13 doctor who trying to treat someone with cancer, they may take a
14 sample with a needle biopsy. They put a needle into the tumor
15 and pull some material out.

16 That sample probably has about 10,000 cells. And if
17 you just take that sample and sequence it, and grind it up what
18 you get, the As, and Gs, and Cs, and Ts. Is an average for all
19 of those 10,000 cells.

20 And that's a problem, because in the sample study, in
21 the 10,000 cells, there are some that are the cancer, there are
22 some that are fighting the cancer. There are some that might
23 be helping the cancer but not actuating it. And you want to
24 understand and be able to drill down and distinguish between
25 those different things.

1 And that's why technology for doing this, and this
2 applies to both families of patents, but I'll stick for now
3 with the Brenner Patents, why that's really, really important.

4 And one of the problems here, and this is where we
5 get into this labeling technique, this tagging technique, where
6 we're going to at least two, and to Your Honor's question, we
7 could have three or four. The Patent only says you have to
8 have two, a minimum of two. But you could have three, you
9 could have four. The problem, Your Honor --

10 THE COURT: Two what, tags?

11 MR. GROOMBRIDGE: Two --

12 THE COURT: Okay.

13 MR. GROOMBRIDGE: -- a tag with two pieces. And the
14 problem you've got here, and it's easy to make examples, like I
15 went to the dry cleaner and they put a label on something. But
16 here what we're talking about is grinding up a huge amount of
17 genetic material. And you could very easily need to have
18 millions of different -- to identify, you need millions of
19 different things.

20 So I believe, and it's a case for this Court to find
21 this out, I believe in the Parse system their tagging approach
22 differs for, like, over 20 million unique labels. And that's
23 part of the problem with these Brenner Patents that we're
24 looking at. And it's directly related to the sequencing
25 method.

1 You recall, Mr. Reines started off with those slides
2 saying you take the DNA, you grind it up, and you can build
3 these short-reads, and then have to piece it together at the
4 end.

5 The way you piece it together is with the tags that
6 are labeled. And you have to be able to find a way of, let's
7 say, uniquely identifying 20 million things. And that has
8 nothing to do with putting a zip code on an address or putting
9 a label on a piece of dry cleaning.

10 What these inventions came up with was a way that no
11 one had ever even thought of, as far as we could tell, where
12 you would, by taking one tag and putting it on -- putting
13 unique tags on a bunch of things, and then going to another
14 step and taking another bunch of these tags and putting them
15 together, you could, in essence, multiply them together. And
16 that's what the patents in the Patent Office call combinatorial
17 tagging.

18 In other words, that way you could get up to a vast
19 population of tags, 20, 30, 40 million, and still be able to
20 trace uniquely back to the sample you wanted. That's what
21 these patents are about. And it's directly related to the
22 sequencing problem that's at issue.

23 And all of this argument about, oh, they changed
24 direction, that has no legal significance, all right. I think
25 I heard Mr. Reines say that, unless the patent includes some

1 text that says our invention is this, that the claims are
2 directed to something else or invalid. There's no law that
3 says that and the processing cited.

4 And to Your Honor's question at the beginning about
5 why are there three patents, they are directed to different
6 aspects of this. The first one is the 981 which is a method of
7 analyzing this pool of nucleic acid.

8 And 197 is method of counting, like I want to know
9 how many I've got. And the 013 is a method of what's called
10 multiplex analysis, which is exactly talking about this idea of
11 multiplying one tag by another tag.

12 So they are to different aspects of different
13 applications that are made possible by having this
14 combinatorial approach, multiplying all the things you can
15 differentiate with the first tag by all the things you can
16 differentiate with the second tag to get an enormous pool of
17 unique identification.

18 And there has been no suggestion anywhere in the
19 briefing or, as far as I'm aware, anywhere else that that
20 technique was in any way routine, conventional, known, any of
21 those things, and to the point that it's an abstract idea. I'd
22 like to talk a little bit about that, Your Honor.

23 Your Honor, at the very outset, I think it seems like
24 we're talking more about law of nature or natural phenomenon
25 than an abstract idea. And they agree that that's what it

1 really at issue, right. In this, the way the law has evolved,
2 that abstract idea is normally used, in fact there's one where
3 we had things like software, where we say you are trying to get
4 a patent on an idea.

5 And when we come to patents on a biological systems,
6 it is almost never argued that the biological process is an
7 abstract idea. And yes, it's true that 10X made that argument
8 in a different case, and let me turn to that in a moment, but
9 we surveyed the law here. And we tried to say are there any
10 cases where a patent was ever invalidated, a biological patent
11 was ever invalidated, because it's found to be an abstract
12 idea?

13 And I'm not sure that we could have found everything.

14 I think there might be one in New Jersey that then went up to
15 the Federal Circuit and got reversed. But what I can tell you,
16 Your Honor, is that the Federal Circuit has never once held a
17 biological patent invalid for being an abstract idea. And what
18 Parse is asking Your Honor to do is to go out and push the law
19 in a direction that it has never been.

20 THE COURT: Well, let me ask this question. In the
21 summary of the invention, your opponent spent a lot of time
22 talking about what's called the reflex method. And he
23 describes that as something that has been trended aside. And
24 this really comes down to tagging.

25 Now, tagging is certainly, I get the impression that

1 tagging is not something that is a product of a law of nature
2 or a phenomenon, a natural phenomenon. It was created by, or
3 at least the kind of tagging done here was created by 10X. How
4 does the tagging relate to reflex, or does it?

5 MR. GROOMBRIDGE: Well, Your Honor, the reason that
6 it's in this patent is because one of the problems in the
7 reflex sequencing is you have to be able to, after you chop the
8 thing into little pieces, and sequence those little pieces, you
9 need to be able to work your way backwards to where did they
10 come from.

11 And that is where this idea of tagging with two tags
12 would multiply one by the other. That's where that comes in,
13 right. And we would completely agree, Your Honor, there's
14 nothing -- that idea of working with DNA or other nucleic acids
15 where you put a short piece of nucleic acid on as the first
16 tag, and put a different short piece on as the second tag,
17 right, then you get the benefit of all the variations that are
18 possible by having the two of them together, getting you off
19 into millions of unique labels.

20 That has nothing to do with natural phenomenon. And
21 that's why they're not standing in this Court arguing that it's
22 a law of nature or a natural phenomenon. Because they couldn't
23 make that argument. It's something that was created by human
24 beings.

25 And Professor Brenner, who has passed away but won

1 the Noble prize, and his colleagues did this, right. What they
2 came up with a way that, frankly, I don't think anyone in this
3 lawsuit is suggesting, had ever been dreamed of before, both
4 having this vast ability to differentiate uniquely between tens
5 of millions of different fragments of DNA.

6 And that's why it's related to the reflex sequencing.

7 And that's why it's in the patent. And that's why, for
8 example, we were talking about, at Column 6, that multiplex
9 identifier which is multiplex means to have multiplied
10 something by something else.

11 It's this idea of I take all the variation that's
12 possible with the first tag, and I multiply it by all the
13 variation that's possible with the second tag to get tens of
14 millions of different possible variables. So that, in effect,
15 in that soup of fragments of DNA, I have a way of uniquely
16 identifying each one of those fragments and tracing it back to
17 where it came from. And this was groundbreaking science, and
18 that's why these patents exist.

19 THE COURT: What does reflex mean to you?

20 MR. GROOMBRIDGE: Reflex is the, I'm not even sure,
21 Your Honor, that I can answer that other than to say that it is
22 this technique for sequencing that these scientists have
23 invented that has various aspects to it, for example, shown in
24 the figure, of which the tagging is just one piece. But
25 essentially, Your Honor, it's a technique for sequencing DNA or

1 other nucleic acid so that it involves moving pieces around
2 within the DNA.

3 THE COURT: All right.

4 MR. GROOMBRIDGE: And so I think there's a few other
5 things I would like to talk about on the Brenner Patent, just
6 maybe working through Parse's arguments here. The first
7 question is can you just look at one claim of one patent and
8 throw out every claim with all three patents? And our view,
9 Your Honor, is absolutely not.

10 And when this case was pending before Judge Noreika,
11 we filed that brief. We put in a couple of the orders which
12 are attached to Exhibits A and B to our brief where Judge
13 Noreika, who confronts these 101 motions on very regular basis,
14 had denied them. Because there was not consensus or agreement
15 about which claims were truly representative.

16 And it was she who said it would be inefficient for
17 us to go down the pathway of trying to resolve all of that at
18 this stage. The way these patent cases work is we have a
19 procedure for narrowing the dispute, and we can pick this up
20 again down the road somewhere when that has happened. And that
21 was what we were referring to when we said inefficient.

22 The law which we did not, and I want to be clear, we
23 didn't put this in our brief, frankly, Your Honor, because this
24 is an issue that Judge Noreika has confronted many times, and
25 we didn't want to seem like we were trying to tell her things

1 that she certainly knows.

2 But there is a law that controls when a court can
3 treat a claim as representative or not. And that is addressed,
4 for example, in the Berkheimer case, which we have cited
5 Berkheimer --

6 THE COURT: All right. I would afford Counsel the
7 opportunity to submit supplemental briefs after today --

8 MR. GROOMBRIDGE: Thank you.

9 THE COURT: -- based upon my questions or anything
10 else you want to submit. I do that after all argument.

11 MR. GROOMBRIDGE: I think that's a very salutary
12 practice. And we will certainly address this, Your Honor.

13 THE COURT: But I want to get back to Judge Noreika's
14 order --

15 MR. GROOMBRIDGE: Yes.

16 THE COURT: -- that you attached. I found it quite
17 interesting. But it doesn't refer to the patents in this case.

18 MR. GROOMBRIDGE: Absolutely not, Your Honor.

19 THE COURT: I'm trying to understand why it was
20 attached. I looked for it in the brief. I'm not sure if I saw
21 it.

22 MR. GROOMBRIDGE: And that may be our fault, Your
23 Honor, because we understand that Judge Noreika's practice has
24 been, where there are many patents with many claims, as there
25 are in this case, if the parties can agree that one claim or

1 two are representative, then that's fine. The Court can
2 proceed in assessing that way.

3 But if the parties can't agree on that, and there is,
4 in the words of her order, no meaningful argument to support
5 these groupings, and the Plaintiff disputes the representative
6 in this sort of claim, then what her practice, as I understand
7 it as being, is to deny the motion and say let's pick this up
8 somewhere down the road after the issues have been narrowed and
9 the number of claims drop down a lot. And that was what we
10 were thinking would be applicable here, that we have over 100
11 claims.

12 THE COURT: When you say over 100 claims, like in the
13 981, there's six claims.

14 MR. GROOMBRIDGE: Yes.

15 THE COURT: And what would be -- how many are in the
16 others?

17 MR. GROOMBRIDGE: There are 26 in the 197 Patent.

18 THE COURT: And how many or being challenged?

19 MR. GROOMBRIDGE: All of them. And so as I
20 understand their motion, they're asking the Court to invalidate
21 every claim of every patent in this lawsuit, which is, by our
22 count, 140-some claims. And, you know, patents are property
23 rights. You can't just throw them out without an analysis.

24 And, you know, Mr. Reines said, and I wrote some of
25 this down, that you don't need to read every single claim. And

1 the claims are remarkably similar and things like that, right,
2 where what he was saying was basically, oh, we don't really
3 need to look at all of this. But that's the point, right?

4 You know, Parse is coming in and saying throw out
5 every claim with all six of these patents. And they haven't
6 engaged any type analysis that the law requires in order to
7 prove that Claim 1 of the 981 Patent is representative of
8 everything involved with the Brenner Patent. And we dispute
9 that.

10 And the law says, and this is the Berkheimer case, by
11 the way, of example, that under those circumstances you can't
12 just take one claim and generalize across every. And, Your
13 Honor, we also have a concern that there's a big effort going
14 on here to reverse the burden of proof that not only is Parse
15 moving, it is also coming into court to challenge the validity
16 of all of these patents.

17 So as the movant bears the burden of establishing all
18 of facts that are necessary for the motion and, as the Patent
19 challenger, has to prove, by true and convincing evidence,
20 everything which is necessary to support invalidity.

21 And so there's a lot of argument, as you've heard Mr.
22 Reines say, for example, that we didn't put things in the
23 complaint, we didn't plead sufficiently that these were
24 invented, that we only had a page in brief, but we didn't do
25 this, we didn't do that.

1 That's all about trying to reverse the burden of
2 proof and saying Parse will stand up and say the patents are
3 invalid. And unless 10X disproves it, then they're invalid.
4 That's exactly wrong, and the law is abundantly clear and, in
5 fact, the statute, that patents are presumed valid.

6 THE COURT: All right. So let me ask you, again, I'm
7 using the expression of the Cliff notes version, but just tell
8 me why the tagging concept doesn't fall within one of the three
9 categories, you know, law of nature, abstract?

10 MR. GROOMBRIDGE: I think, Your Honor, there's
11 agreement that it's neither a law of nature nor a natural
12 phenomenon that's motivation here. And we would say the reason
13 why is because it's something that's entirely the creation of
14 human beings. Out there in nature, we would not find any way
15 that pieces of nucleic acid are being used as labels. It
16 doesn't occur in nature.

17 THE COURT: All right.

18 MR. GROOMBRIDGE: And why is it not an abstract idea?

19 And that may bring me to their very heavy reliance on that
20 Becton Dickenson case. It's not an abstract idea, because the
21 mere fact that it emanated from someone's mind doesn't make it
22 an abstract idea. It is a solution to this problem of how to
23 uniquely identify tens of millions of different things that
24 have been sitting in a tube, undifferentiated.

25 And it's not an abstract idea, because these

1 inventors came up with this approach in which you could combine
2 the first tag with the second tag. And they tell you how to do
3 it. And they give you --

4 THE COURT: So it's the combination of two tags,
5 isn't it?

6 MR. GROOMBRIDGE: It's exactly the combination of two
7 tags, but it's not -- and I want to be clear, because I myself
8 struggle to explain this. It's not merely taking one tag and
9 another tag. It's the idea that I could have, let's say,
10 10,000 of the first tag, and 10,000 of the second tag. And I'm
11 multiplying those together so that I end up with tens of
12 millions of possibilities.

13 And that, and how you do that, not merely the idea
14 that you can do that, it's the fact that they showed that, when
15 you were working with DNA, it was possible. And they gave you
16 specific authoritative techniques as to how to do it, right.
17 And that is anything but an abstract idea.

18 It is an extremely useful and very practical way of
19 differentiating between vast numbers of otherwise
20 undistinguishable fragments in a test tube.

21 THE COURT: Your opponent would probably say if you
22 take 1,000 shirts, and you just throw them in a pile, how do
23 you know whose shirt it is without tagging it?

24 MR. GROOMBRIDGE: And this is, at some level of
25 simplicity, we can come up with these, sort of, cute analogies.

1 But we're not talking about DNA, we're talking about pieces of
2 -- I'm not talking about shirts, I'm talking about pieces of
3 DNA in a test tube.

4 THE COURT: Right.

5 MR. GROOMBRIDGE: And there's a practical problem of
6 how you actually do this. It's not like the dry cleaners where
7 you put one on there, right. And that's why, at some level of
8 oversimplification, you can say anything is simple, is
9 abstracted, whatever, right. But what these inventions show is
10 a way working with the pieces of DNA in the test tube.

11 THE WITNESS: But just for the sake of argument, just
12 for the sake, I haven't made up my mind at all, but let's
13 assume it's abstract, what's the abstract, what's the plus?

14 MR. GROOMBRIDGE: What's the plus?

15 THE COURT: Step two.

16 MR. GROOMBRIDGE: The plus is that it enables you to
17 do that which was previously impossible. And I don't think
18 there's any dispute over this.

19 THE COURT: It's inventive.

20 MR. GROOMBRIDGE: Right, it's inventive. And there's
21 an argument that because the actual lab techniques that are
22 being used here may, and I'll stress the word may, be those
23 that are in -- that were already in use. Then necessarily,
24 because you're using tools that already existed, whatever you
25 create with those tools must be unintentional. And that's, you

1 know, like I said. People building a house, they're using a
2 nail gun from a store, whatever. Therefore, whatever they
3 create with that must be inventive.

4 THE COURT: Yeah.

5 MR. GROOMBRIDGE: Like, that just doesn't follow.

6 THE WITNESS: In reading the materials, I got the
7 impression that 10X Genomics has created a kit of some sort,
8 that is sold publicly, which allows researchers, I guess, to do
9 the tagging. Is that correct?

10 MR. GROOMBRIDGE: That is essentially correct, Your
11 Honor, yes.

12 THE WITNESS: All right. Does the kit come into play
13 at all?

14 MR. GROOMBRIDGE: I don't think so here, because the
15 technology that's embodied in that kit is something that came
16 along after these patents. In other words, in the patent
17 world, and I think this is probably common ground, the way
18 patents work is somebody comes with something, and they write
19 up a application, and it's filed. And they day they file it is
20 what, in the patent world, is called a priority date.

21 And for all of the purposes that we talked about of
22 whether this was invented or not, we're focused on that date.
23 It's like time stopped then, right. And everything that
24 happens afterwards isn't really relevant.

25 And so the chips came into being long after. So, you

1 know, they could be relevant if the lawsuit moves forward.
2 Then we might be talking about damages and things like that
3 where additional -- they might come into play. But for
4 purposes of today, what 10X did years later doesn't really
5 factor into the decision making.

6 THE COURT: All right. The last question I have is
7 does it matter that the patent office approved the patent --

8 MR. GROOMBRIDGE: Well --

9 THE COURT: -- if it doesn't bind the Court?

10 MR. GROOMBRIDGE: Well, to us I think we want to back
11 up. That's an excellent question, Your Honor. And I might
12 have otherwise forgotten.

13 THE COURT: I only try to ask excellent questions.

14 MR. GROOMBRIDGE: Well, so far I'm impressed with the
15 batting average, right.

16 THE COURT: Go ahead.

17 MR. GROOMBRIDGE: So what's going on here, they cite
18 a case called in re Rudy, in which the Federal Circuit says,
19 unsurprisingly, the arbiter of what the law, Section 101, is
20 the Supreme Court and the Federal Circuit, not the Patent
21 Office. The Patent Office can't create the law. And we totally
22 accept that.

23 From that case, Parse then said you, the Court,
24 should disregard everything. You should give it zero weight
25 they say. Now what we're pointing to here in the Patent Office

1 proceedings is the question of facts, not law. One of the
2 questions here is this routine and conventional?

3 And the Patent Office looked at that question and
4 decided it was a matter of historical fact. It's not. Now we
5 certainly don't contend that that's binding on the Court.
6 Otherwise, you know, what would the Court be doing? The
7 Court's entitled to look at that.

8 But we're at the Rule 12 stage. And, I mean, I take
9 this to be a 1236 motion. It doesn't actually say that in the
10 brief, but presumably that's what it is. And so, you know, I
11 have scarcely to mention, Your Honor, that the fact standard
12 doesn't apply here, right. We can't be deciding facts
13 adversely to the comments of the motion.

14 And there are plenty of facts here that are
15 sufficient to show, intrinsically, that this was not routine
16 and conventional. In fact, it was inventive. And at this
17 stage in the case, in our view, that would be the end of that
18 inquiry.

19 And we're not talking about the Patent Office having
20 said the law is something. This is a factual inquiry, and that
21 in re Rudy case simply doesn't have any bearing.

22 There is one last thing I would like to talk about
23 which is the reliance on the Becton Dickinson case which, I
24 think, may be the kind of, frankly, the underlying motivation
25 for why the motion as to the Brenner patents were even brought.

1 That's a different lawsuit. 10X filed a motion to
2 dismiss which was never decided and the case was settled. On
3 the 12(b)(6) standard, it's not clear to us, and certainly no
4 justification for an offer as to why one could even look at
5 that.

6 If we were in an evidentiary stage of the proceeding,
7 I could imagine that they would say that's an admission, part
8 of the admission. 10X, you said this would explain it. But at
9 1236, we don't go outside the pleadings and whatever documents
10 are intrinsic to the pleadings. And briefing in a completely
11 unrelated case is not that.

12 And so, you know, there's an element of a, sort of,
13 got you. Ah-hah, I found another case where you said something
14 that I think is inconsistent and then made use of that. And
15 maybe they can find a way to do that. But a Rule 12 motion,
16 particularly a 1236 motion, is not it.

17 And then if we even look at this, you know, Mr.
18 Reines said several times that the patents in that case were
19 virtually identical to the ones in this case. We wouldn't
20 know, because they're not part of the record.

21 They're asking Your Honor to invalidate these patents
22 based on similarity to a set of other patents that haven't even
23 been put in front of the Court here. And that is perceived,
24 you know, I scarcely need to point out what's procedurally
25 troublesome about that.

1 THE COURT: All right. Obviously on a motion to
2 dismiss, it's the Iqbal/Twombly standard. You're correct then.

3 Usually a court can consider any documents that are integral
4 to the complaint, obviously the patent, something we could take
5 additional notice of, maybe a third category. And perhaps that
6 can be briefed supplementally.

7 MR. GROOMBRIDGE: We'd be happy to brief that, Your
8 Honor. And I think, unless Your Honor has other questions,
9 that is probably everything I have to say on the Brenner
10 Patent.

11 THE COURT: No. Why don't I hear from your opponent,
12 their rebuttal?

13 MR. REINES: Well, Your Honor, we've converged on a
14 couple of concepts, I guess, foreshadowed what I thought the
15 agreement would be. Only thing you heard in the amended
16 concept was this combinatorial tagging which is a fancy way of
17 saying two tags.

18 You didn't hear anything from Mr. Groombridge that
19 there's any other mention of the two tabs. And then what the
20 argument is, trying to gussy that up, to be honest, is to say
21 well, if you have the different customers, as dry cleaning, and
22 you have the different types of garments, you can have a whole
23 bunch of different buckets. You can have a bucket of the
24 Slomsky shirt, the Robinson shirt, the Jones pants.

25 But there's no reason why, with one tag, you can't

1 have that many. It's just, whatever, you've chosen to do it
2 with two tags. So the numerocity of it seems to be what is
3 being emphasized.

4 THE COURT: Is there any case that stems from the
5 proposition that tagging, in and of itself, is an abstract
6 concept?

7 MR. REINES: Okay. The answer is not directly, okay.
8 There's two things we rely on.

9 THE COURT: Because we're digging down deep now when
10 we say tagging DNA.

11 MR. REINES: Well --

12 THE COURT: You know, in some ways the analogy about
13 the shirt is good. In other ways, it's quite a large object
14 compared to digging down deep into DNA.

15 MR. REINES: That would be something to consider in
16 the normal case. In this case, just so that you remember, if
17 you don't mind turning to Page 27 of the slide deck, because I
18 think this is helpful, it lays it out super helpfully.

19 This is 10X seeking, on an exact same motion at the
20 exact same stage, seven patents, and the abstract idea of
21 labeling different nucleic acid models with the different
22 labels, okay.

23 And then to the next one, the abstract idea of
24 labeling different objects, e.g. DNA, with different labels.
25 And the real point, bringing the analysis to the next level,

1 Your Honor, is a lot of this issue of abstractness that's been
2 done in software, okay.

3 THE COURT: The issue of what?

4 MR. REINES: Abstractness in 101.

5 THE COURT: Oh, abstract.

6 MR. REINES: This type of question comes up a lot in
7 this --

8 THE COURT: Abstractness, okay. Go ahead.

9 MR. REINES: -- in software, okay. So first of all,
10 we have them admitting it point blank. And he's saying, well,
11 don't look at that, because that's so -- the statement of ten,
12 you know, ten attorneys from 10X on it has no meaning at all.

13 Are those attorneys just saying something that's
14 frivolous or that they themselves, the 10X corporate position
15 is the tagging is abstract to the point of invalidity? I've
16 got slides, we've got documents, they're saying that has no
17 credibility, just brushing that away.

18 But to your point, I want to say this. On applying
19 it where most of the law, and I'm sure the Court looking at
20 some of this is going to see a lot of this comes up in
21 software. In software the argument's made all the time,
22 labeling the document and tagging the document with the complex
23 computer software is old, because it's just taking an idea and
24 using it, and abstract idea, and using it in a different
25 environment, okay.

1 Now this is, because it's so on point for what your
2 question is, I wanted to read this. I'll read it slowly. This
3 is Document 13-5 in this record at Page 17, talking about the
4 Fodor patents which are about tagging DNA.

5 The claims in the Fodor Patents similarly fail under
6 Step 1, because they are directed to the long practiced idea of
7 labeling different objects with different labels applied in a
8 particular technological environment of DNA. Merely applying
9 this old solution of different labels in a particular
10 technological environment of DNA is insufficient to produce
11 patent eligible claims.

12 Citing Alice's Supreme Court case, all right, which
13 says, they quote it, "The prohibition against patent's abstract
14 ideas could not be circumvented by attempting to limit the use
15 of the idea to a particular technological environment," U.S.
16 Supreme Court.

17 And you have this. So you can go and check it. And
18 then it cites a whole bunch of cases holding exacting what I
19 said. And it says as in Tangelo, innovations, intellectual
20 ventures, contact extraction, and many similar cases, in this
21 case humans have long performed the abstract idea of using
22 different labels to label or identify different instances on an
23 object, including serial numbers, Dewey decimal, and so forth.

24 Attempting to limit the application of that abstract
25 idea to DNA, and other nucleic acid models in their brief, does

1 not save the claim, under Step 1, any more than would limiting
2 the application of the idea of Internet or to a generic
3 computer.

4 That directly addresses your question. It's in our
5 brief. And I further -- they just say don't mind what we say,
6 it's another case. This is the 10X contemporary position on
7 this question. That can't be just sluffed off.

8 Now you asked me about a case, and I said not
9 directly. There's an indirect case. They say in here, and
10 I'll give you the sentence, that it's conventional unless
11 otherwise indicated. The only indication about tagging is that
12 it's old. This is in Column 1, the very first sentence in the
13 entire package.

14 We've previously described methods that enable
15 tagging, each of a population of a fragmented genome, and then
16 combining them to react together to create a population of
17 articles. We're saying that's what's old, okay.

18 And now, so the tagging deemed conventional, which is
19 like the opposite an inventive concept under Step 2, because
20 they have the statement that says anything in here, unless they
21 otherwise indicate it's conventional, okay.

22 Now all this is well and good. But we have a
23 different situation in not only their inadmission, in fact we
24 think it's up and down and inside out. I was surprised, and I
25 say this sincerely, I'm a sincere person, this isn't lawyer

1 stuff, that Mr. Groombridge said he didn't even know what the
2 reflex method was.

3 They're bringing a lawsuit against a tiny startup
4 company on a patent that's about the reflex method. I don't
5 know how you can look at this patent. Two-hundred and fifty
6 times it says reflex. Every sentence is a summary of the
7 invention that says reflex. Figure 1 says reflex. Everything
8 says reflex. And their attorney --

9 THE COURT: It is a --

10 MR. REINES: -- very experienced attorney --

11 THE COURT: It's a defined term in the --

12 MR. REINES: It's a defined term. And it's,
13 whatever, it's the invention of the patent. And Figure 1 shows
14 it.

15 THE COURT: It says reflex, I had reflex sequence.

16 MR. REINES: And he doesn't even know what it is?
17 It's one thing to say, okay, we're not shooting for that.
18 We've shifted courts, we're shooting for double labeling or
19 whatever. But he's saying he doesn't even know what the
20 patent's about, what the invention is? That's the first thing.

21 The second thing on this point, Your Honor, is Mr.
22 Groombridge said there's nothing in the law that says we have
23 to describe what the invention is in the patent. You don't
24 need a law book to tell you that you're supposed to describe
25 what the invention is. That's why there's a summary of the

1 invention section. That's why the patent law requires an
2 inventive concept to be present, if you're directed to an
3 abstract.

4 So we have a unique situation. This isn't just me
5 coming -- if for some reason the invention said you take one
6 label, and then you use the second label, and you've got two,
7 so we're better than just one label, one label would be
8 abstract, so now we're at two, maybe we could help some of the
9 debates that are going through your mind.

10 But that's not even what the patent's about. That's
11 as old as the tagging. The new is the reflex method which
12 Counsel doesn't even know what it is. How is that an inventive
13 concept shown on a Rule 12 motion?

14 At a minimum they would need to re-plead and explain
15 where their inventive concept is and all of that. I don't see
16 how we can go on with this patent, which is part of the
17 pleading, saying the invention's a method their counsel doesn't
18 know what it is.

19 And that labeling which is described as conventional,
20 because it doesn't otherwise indicate that it's new, is the
21 invention, I don't see how that happens without at least some
22 pleading explanation of how we get there.

23 Now the thing that I want to get to --

24 THE COURT: Oh, you're raising an issue, and I'm just
25 wondering how it's handled in the patent context about

1 permitting the leave to file an amended complaint.

2 MR. REINES: It is not unheard of in this case. In
3 fact, in that Fodor case, 10X challenged them. They re-
4 flagged, there wasn't an order, but they tried to use the
5 complaint to, what we call, pleading around the patent. And
6 10X said that's not good enough. You can't plead around the
7 patent.

8 So it is something to think about. We think that, I
9 think I've explained it simply enough in the summary of the
10 invention. It's defined enough that we don't need -- that
11 their attempt to plead around, I think, is disputable. But it
12 is something to think about.

13 Now I do want to go to this sort of -- other than the
14 fact that they've only tried to tell you that there's one
15 inventive concept, they call it a fancy names. And I don't
16 even remember the fancy name, the double, they called the two-
17 tagging something, compound tagging or something like that.
18 That's the only thing that says in there.

19 This idea of a multiplicity of claims, whether they
20 use DNA or RNA for that, they're not saying that's the
21 invention. That doesn't raise something new. In fact, that's
22 what they said with respect to the BD case.

23 I promise this is -- I'm winding up. Let me just ask
24 you to look at two slides to wind up. I'm at 26, and I hope
25 this deck's been helpful.

1 Okay. This is 10X talking about their patent in this
2 District Court, all right. This can't be something that no one
3 can listen to, that we have to hold our ears. That doesn't
4 make any sense.

5 Here's 11. The 981 Patent, which is on your deck in
6 front of you and before you, the Brenner method claims are
7 directed to tagging sample polynucleotide. And then it goes
8 on, the two tags, okay.

9 They group every single claim in three patents
10 without any worry about it, and this is the legal standard.
11 What are the claims directed to? They're directed to double
12 tagging. Their own statements, I won't go back to it, but
13 their own statements in the other case said using tagging is an
14 abstract idea. And applying it in the technological concept of
15 DNA doesn't make it somehow special. Because Alice says
16 limiting it to a particular environment is no good.

17 So they're comfortable. You don't, for Step 1, the
18 idea that you have to look through 20 -- or you know, an
19 encyclopedia to figure this out, they were willing to group all
20 their claims together as directed to this double tagging
21 concept, inventive concept.

22 Why shouldn't you be able to do that? And why
23 shouldn't we be able to do that? So that's the first one. And
24 then the next page, to the last page, is this question of,
25 well, Judge Noreika doesn't, you know, has this process. I

1 don't know whether she does or not.

2 But here seven patents of the Fodor family that they
3 group, the 10X is using different labels to identify different
4 objects, is exactly what we have here. They each claim, in
5 various forms, exactly what we have here, the abstract idea of
6 labeling different nucleic acids with different labels.

7 They were comfortable grouping like that. Now we're
8 somehow wrong for doing that? That doesn't make any sense.

9 THE COURT: Well, tell me what -- Counsel says to
10 look at all six patents, there are 140 claims. What decision
11 are you asking me to make with respect to grouping?

12 MR. REINES: Right. We are grouping them. But we're
13 grouping them --

14 THE COURT: I couldn't tell from the briefs exactly
15 how many claims were at issue.

16 MR. REINES: Oh, I don't have the exact count. I
17 think it's around half and half, so there's about 40 or 50
18 claims. I don't want to, you know --

19 THE COURT: Well, and as the Judge, make a decision
20 on --

21 MR. REINES: Okay. And that's --

22 THE COURT: -- on 40 or 50 claims.

23 MR. REINES: I thought I addressed that.

24 THE WITNESS: How do you group them?

25 MR. REINES: Right. The Brenner method claims, this

1 is on 26, it highlighted with red underlines, they were willing
2 to group all of them in saying they're all directed to invent
3 to the concept of double tagging.

4 THE COURT: What are you doing? What are you doing?
5 That's what they did in that case. But what are you doing in
6 this case?

7 MR. REINES: But this is about the same patent. This
8 isn't about different patents. That's where I may have
9 misspoken. So at Page 26, they were talking about the Brenner
10 Patents, and the 981 Patent that's in front of you.

11 THE COURT: Okay. So you want them all grouped
12 together?

13 MR. REINES: Just like they did.

14 THE COURT: Okay.

15 MR. REINES: And it happens commonly. The idea that
16 -- because there's all these dependent claims that add, okay
17 you ligate, okay you use DNA, okay you use RNA. And the real
18 question is, is there something different about the different
19 claims in terms of the question of what they're directed to in
20 the matter.

21 THE COURT: Okay.

22 MR. REINES: And they admit, with using the words of
23 the test of Alice, "are directed to," the Brenner method claims
24 are directed to. They group them all. And when Mr.
25 Groombridge made a fairly lengthy and fulsome presentation, the

1 only inventive concept that the claims are directed to is the
2 double tagging.

3 So it's not really disputed. They can throw elbows
4 but not really -- if the dependent claims don't have added
5 special sauce, then they don't matter for it, because they're
6 not adding anything. You know, patent lawyers, I mean, it's
7 your question, why is there 100? Are there really 100
8 inventions here? We all know there's not 100 inventions here.

9 There's double tagging here, and there's tagmentation on the
10 other one. And that's just the way that it boiled down.

11 But I wanted to address the, just a final point on
12 Judge Noreika's practice. Judge Noreika has, you know, you're
13 thinking, okay, I've got to pay for this, it's kind of
14 complicated. She's got 400 of these or something like that.
15 That's why, you know they're asking for the help.

16 THE COURT: Four hundred clients?

17 MR. REINES: Four hundred patent cases.

18 THE COURT: Oh, patent cases, yeah.

19 MR. REINES: Yeah, she does.

20 THE COURT: I don't have 400 patent cases.

21 MR. REINES: God bless, right. And she said unless
22 the parties agree that there's a representative claim, and
23 let's just take the 981, Claim 1, unless the parties agree that
24 there's a representative claim, then I'm never going to hear
25 it.

1 Well, that's what someone does that has 400 patent
2 cases. The other thing that someone does when they have 400
3 patent cases is they look to highly respected colleagues that
4 pitch in and help with things, take overflow so they can
5 actually do the analysis.

6 If you look at Claims 1 through 6 of the 981 Patent,
7 there's really one claim there for purposes of this. It would
8 be Claim 1 which has got the double tagging in it. And then it
9 adds these little things like where in the sample nucleotide
10 comprised mRNA where there's one ligation action.

11 They don't argue that any of those things are the
12 inventive concept that somehow changed the analysis. So what
13 they're essentially saying is, by refusing to agree that Claim
14 1's representative, which is why so often these cases do have
15 representatives, they can unilaterally prevent a pleading
16 motion that might scare everybody going through claim -- you
17 construing dozens and dozens of claims across all these
18 patents. I mean, it's a lot of work.

19 Judge Noreika's sitting in a different position. For
20 her it might be if you don't agree, I'm not hearing it. Well,
21 that's why we're here, because that's judicial emergency
22 language.

23 THE COURT: What's the next step in our process if
24 she doesn't agree? Do you have to decide a motion to dismiss
25 first?

1 MR. REINES: I think here, it seems to me that either
2 the Court is comfortable, if you're asking me next step here,
3 if the Court is comfortable concluding they can't identify the
4 double tagging as the invention, because they described that as
5 the background tagging, and what they do describe as the
6 invention in all the Brenner patents, because it's the same
7 thing, is the reflex method that even 10X doesn't know what the
8 reflex method is.

9 And you can't prove that there's an inventive
10 concept. As abstractness, they acknowledge that tagging with
11 DNA is an abstract concept. Is it also inventive? They said
12 no.

13 THE COURT: Okay. So you're asking me to group.

14 MS. JACOBS: Yes.

15 THE COURT: And I would just like it in a
16 supplemental memorandum to just talk about that a little bit
17 more.

18 MR. REINES: That's very good guidance, and I'll --

19 THE COURT: How it can be done in a case like this
20 with all the patents that are out there. All right. I would
21 afford Mr., let's see --

22 MR. GROOMBRIDGE: Groombridge.

23 THE COURT: Groombridge, the last word if you want
24 it. But we've been together almost two hours now on three
25 patents.

1 MR. GROOMBRIDGE: And we still have three more to do,
2 Your Honor.

3 THE COURT: We may have to break for lunch. And I
4 have a 3 o'clock conference. All right, well, go ahead.

5 MR. GROOMBRIDGE: Very briefly, Your Honor, in terms
6 of Your Honor's question about what Judge Noreika could do, the
7 order is that, and we will attach it to Exhibits A and B in our
8 brief, and show that, but she denied the motion to dismiss and
9 said, should the case proceed to trial these certain attempts
10 would be narrowed through the parties' disclosures and at least
11 will be picked up again when it was more focused.

12 THE COURT: What's the next step in our process?

13 MR. GROOMBRIDGE: We respectfully submit the next
14 step is denial of the motion to dismiss and answer. And then
15 we would move forward with a series of disclosures. Typically
16 in patent cases, and I'm sure we would be able to agree on
17 this, the parties provide contentions. We say why we think
18 they infringe. They say why they think the patents are
19 invalid. And we go down a process of trying to sort of join
20 issue on that.

21 THE COURT: Okay. It sounds like the same process --

22 MR. GROOMBRIDGE: Yes.

23 THE COURT: -- to some extent, as what we're doing
24 now.

25 MR. GROOMBRIDGE: Well, I think typically what

1 happens is we end up whittling things down, you know, as the
2 case progresses, the number of certain patent claims in play
3 diminishes.

4 THE COURT: Okay.

5 MR. GROOMBRIDGE: Just to the point of on the reflex
6 process, I was trying to answer, the reflex process is a way of
7 sequencing DNA in which you move pieces of DNA around. I think
8 that's a fair summary of it. It's quite detailed, and I didn't
9 want to take any more of our time just talking about the
10 details.

11 And just on representativeness, and I'm just looking
12 at a step to pick up, for example, the 013 Patent which
13 includes claims that talk about the huge number of numerical
14 combinations. And I'm looking at Claim 18 that says where the
15 plurality of tags comprises at least 200,000 different second
16 tag sequences. And we would say that's an example of why the
17 laundry labels don't work here.

18 You know, we're talking things that are not just a
19 matter of degree, that the issue -- the problem that's being
20 solved is one that involves vast numbers of otherwise
21 unidentifiable things. And that that's the same problem as
22 figuring out whose shirt it is.

23 THE COURT: Okay.

24 MR. GROOMBRIDGE: And with that, I will --

25 THE COURT: All right. Why don't we do this?

1 Obviously I'm going to take all this under advisement. But
2 it's now 12:25. Why don't we come back at maybe ten after
3 1:00, take 45 minutes for a lunch break? And then we'll
4 continue, because I hope we can finish the next three by 3
5 o'clock. We should be able to.

6 MR. REINES: I would think so.

7 THE COURT: I think after hearing the initial
8 arguments it might streamline somewhat.

9 MR. GROOMBRIDGE: Yes, it might.

10 THE COURT: All right. Well, it's interesting, and
11 we'll -- all right, so let's take a break now and come back at
12 ten after 1:00, all right. I stand in recess.

13 (Whereupon, the above-entitled matter went off the
14 record at 12:25 p.m. and resumed at 1:18 p.m.)

15

16

17

18 A F T E R N O O N S E S S I O N

19 1:18 p.m.

20 THE COURT: Please be seated. You can proceed,
21 Counsel. This is Mr. Walter?

22 MR. WALTER: Yes, very good, thank you.

23 THE COURT: All right, welcome.

24 MR. WALTER: I am going to address the Buenrostro
25 patents; those are the three remaining patents. I'm going to

1 proceed similarly to Mr. Reines, and will do a primer, and then
2 follow Step 1 and follow Step 2, although I probably won't be
3 as long as he was.

4 So if you have our slide deck, what I'd ask you to
5 take a look at is Slide 50 to start. The Buenrostro Patents,
6 there's no invention --

7 THE WITNESS: Wait, which number, 50?

8 MR. WALTER: Slide 50, we're now in the second half
9 of the deck. So the Buenrostro Patents, there's no invention
10 in those patents. What there is the discovery of a natural
11 phenomenon, the transposon, we'll interrogate open chromatin.
12 And all they do is they plop that on top of a routine and
13 conventional process called tagmentation. And I'm going to
14 talk about what that's all about right now.

15 So on Slide 50 we have the same graph that you saw
16 before related to short-read sequencing. And what this
17 tagmentation process is about is that first arrow where we
18 refer to fragmenting the DNA.

19 The word tagmentation, it's a combination of two
20 words, fragments and tag, okay. So what happens in
21 tagmentation is you tag the DNA at the same time as when you
22 fragment it. And that's what tagmentation refers to.

23 Okay. Now if you go to Slide 51, you have an
24 overview of how this tagmentation process works. And you can
25 see, in the upper left-hand corner, there's a couple of gray

1 blobs. Those are enzymes, okay, those are proteins that carry
2 out functions within the cell.

3 And those enzymes, in the context of tagmentation,
4 are called transposon. And what transposon can do is they can
5 attack of piece of DNA within a cell, they can clip it out, and
6 they can move it to another part of the chromosome, that's why
7 it's called a transposon, because it transposes something from
8 one place to another.

9 And what happens in tagmentation is you have two of
10 these transposons, and they attack two regions of the DNA, and
11 they cut that region of DNA out of the chromosome. And you can
12 see that at the bottom of the slide. You can see this
13 tagmented DNA fragments cut out of the larger piece of DNA.
14 And when it cuts the DNA out, it introduces these tags. And
15 you can see those with blue and green, okay.

16 Now this process that I've laid out here, this is a
17 process that happens in the nature, okay. This is what
18 transposon can do in nature. The only thing about
19 tagmentation that's not natural is the tags that you include
20 with the enzymes.

21 As you see in the upper left-hand corner, those
22 enzymes, those transposons are loaded with the green and the
23 blue tags. In tagmentation, the payloads are artificial
24 sequences that are required to do the DNA sequencing, okay.
25 Otherwise, this tagmentation process is just based on a

1 mathematical process. Now the important point --

2 THE COURT: Could we just go back?

3 MR. WALTER: Sure.

4 THE COURT: I want to make sure I understand it. The
5 transposons, that's in a cell?

6 MR. WALTER: Yes.

7 THE COURT: All right. And I think you said it
8 transports DNA?

9 MR. WALTER: Right. That's what they actually
10 normally do in the cell, is they cut the DNA, and then it
11 causes the DNA to move to another region of the chromosome.

12 THE COURT: When you say of the chromosome, is the
13 chromosome part of the cell?

14 MR. WALTER: Chromosomes are part of the cell. So
15 for instance, in the human body every cell has within it two
16 copies of 20-some chromosomes.

17 THE COURT: Okay. And is that the DNA?

18 MR. WALTER: Yes. And we're going to talk a little
19 bit about more about the structure of the chromosome and what
20 exactly it's made up of. But one of the very important key
21 components in a chromosome is DNA. And in just a few slides,
22 we'll get to the structure of the chromosome --

23 THE COURT: All right. So what I see is the
24 transposons attaching to the DNA.

25 MR. WALTER: Yes.

1 THE COURT: And it causes it to fragment?

2 MR. WALTER: It causes it to fragment --

3 THE COURT: And then --

4 MR. WALTER: -- and at the same time -- go ahead.

5 THE COURT: And fragment and tags it. So it's called
6 tagmented DNA fragment, but where does the green and blue come
7 from?

8 MR. WALTER: Okay. So the green and the blue, in
9 nature, the green and the blue are naturally occurring end
10 sequences that correspond to particular regions of the DNA
11 they're going to move.

12 In the tagmentation process, it's used by scientists
13 and researchers to prepare DNA for sequencing. Those blue and
14 green sequences are sequences that are provided by
15 manufacturers of sequencing instruments to allow DNA that you
16 prepare for sequencing to be used in their sequencing.

17 THE COURT: So that's not artificial, that's man-
18 made?

19 MR. WALTER: That's right. The green and the blue in
20 the tagmentation process, those are man-made sequences. That's
21 right.

22 THE COURT: And did they initially attach to the
23 transposons?

24 MR. WALTER: Yes. So the maker of the kit for doing
25 this tagmentation process, they supply the transposons that are

1 loaded with the blue and green tags.

2 THE COURT: Okay.

3 MR. WALTER: Okay?

4 THE COURT: Go ahead.

5 MR. WALTER: Now, the important thing to understand
6 with regard to tagmentation is on Slide 53, okay. I want to be
7 clear here, tagmentation is not the invention in the Buenrostro
8 Patent, okay. Tagmentation was a routine and conventional
9 prior art concept, okay. The patent told you that. It's on
10 Column 14. It states, and this is the 207 Patent, it states
11 methods for tagmenting isolated genomic DNA are known to the
12 art.

13 And it cites a whole bunch of references where
14 tagmentation has been done before. And it says, in fact, it's
15 so well known in the art you can buy a kit from multiple
16 vendors to do tagmentation. One kit you could use is a kit
17 supplied by Illumina. And Illumina is a manufacturer of
18 sequencing material, okay. So tagmentation is not the
19 invention, but it's a prior art with human conventional
20 concept.

21 And most of the steps with tagmentation are, in fact,
22 natural. The only thing in tagmentation that's not natural is
23 that you change the payload of those enzymes to include those
24 sequencing sequences, which are called sequencing factors.

25 THE COURT: Is there -- the first patent of the three

1 is the 995 one. Is there any reason why you refer to the 207?

2 MR. WALTER: No, no reason. No reason whatsoever why
3 we refer to the 207 instead of the 995. We could have picked
4 any one.

5 THE COURT: Same language in Column 14?

6 MR. WALTER: Yes. It's going to be the same
7 language. You know, it might appear in a slightly different
8 column, okay. Because when they format the different patents,
9 you know, it shifts around a little bit. But it's going to be
10 pretty close to the same spot.

11 All of the specifications of the Buenrostro Patent
12 are identical. So the language I'm showing you for any one of
13 the patents is going to be present in the other two
14 specifications as well.

15 THE COURT: Okay.

16 MR. WALTER: All right. So what is new in these
17 patents if it's not tagmentation? To understand that, we've
18 got to look a little but at what the chromosome looks like.
19 And that's on Slide 54, okay.

20 On Slide 54, I'm showing a picture of a chromosome.
21 That's what a chromosome will look like if you look at it under
22 a microscope. And maybe you remember this from high school
23 biology class, put a cell under the microscope. It was kind of
24 a funny structure with two arm and two legs. That's what it
25 looks like.

1 And there's a line that comes out of that. And
2 there's a reference to closed chromatin. If you were to zoom
3 in on that chromosome, what you would see is that that
4 chromosome is made up of DNA that's wrapped around these
5 barrel-shaped proteins, okay. And you can see four of those
6 barrel-shaped proteins there.

7 And those barrel-shaped proteins are called histones,
8 okay. And the combination of the barrel shaped protein and the
9 DNA, that's called chromatin, okay. And what's shown on the
10 left of this figure is closed chromatin.

11 And now what sometimes happens in nature when the
12 cell is going to access with DNA, is that the closed chromatin
13 gets strung out. And you see that on the right. You see the
14 closed chromatin get strung out into the open chromatin. And
15 what you can see is that the DNA within the chromatin gets
16 exposed, okay.

17 And, you know, that's something that happens in
18 nature every day, every moment in your cells, that's happening.

19 And it's happening because what's happening is the cell gets
20 packed up in that DNA so it can make new cells.

21 Now what is actually, we know in this patent, okay,
22 it stems from this natural phenomenon. If you go to Slide 55,
23 what the people who are the main inventors on this patent
24 hypothesize, they have a hypothesis, they say well, maybe the
25 transposon, and that's called TN5, and you can see that on

1 Slide 55, it said maybe the transposon, it'll work on the open
2 chromatin, which they call accessible chromatin.

3 And that's not really a surprising thing. You know,
4 it's not surprising at all, because we know the transposon
5 works on DNA. And if you have the DNA exposed within the
6 chromosome by it becoming open chromatin, there's no reason to
7 think that the transposon is not going to do its thing on the
8 open chromatin.

9 And it turns out their hypothesis was right. And so
10 what do they do? They claim this natural phenomenon, which is
11 a transposon enzyme, a normal transposon enzyme, was working
12 nature to access open chromatin just as you expect it would.
13 They claimed that by plopping that natural discovery on top of
14 the routine and conventional steps for fragmentation. And you
15 can see that on Slide 56. That's Claim 1 of the 207 Patent.

16 And, you know, basically everything you need to know
17 to understand this claim I explained to you. And the steps of
18 the claim, you can tell just by looking at them, it's just the
19 steps of tagmentation through routine and conventional steps
20 for tagmentation using a kit that you can buy from Illumina or
21 another manufacturer applied to regions of open chromatin,
22 okay?

23 So that's the only thing that there is in this patent
24 is the discovery and observation of the natural phenomenon that
25 the transposon will, in fact, do its thing on open chromatin.

1 THE COURT: And what does it do?

2 MR. WALTER: What it does is it attacks the DNA, it
3 cuts it, and tags it.

4 THE COURT: And what opens the chromatin?

5 MR. WALTER: What opens the chromatin is natural
6 processes within the cell. So if you go back to Slide 54, you
7 know, you can see the chromosome is bound up into this
8 structure with arms and legs.

9 And if the cell wants to access the DNA to read it,
10 to re-code a protein, or carry out some other function of the
11 cell, you have to have some other mechanism in the cell to open
12 it up so that the rest of the facility or machinery can get to
13 it and do its thing.

14 And so, you know if you have genes within a cell that
15 are being expressed, that chromosome's going to open up --

16 THE COURT: So what does the patent do? Give me the
17 Cliff Notes version of what 207 does.

18 MR. WALTER: 207, it's not non-invention, it's just a
19 discovery of the natural phenomenon that a transposon will
20 access open chromatin, and they can use that to observe the
21 open chromatin, the natural phenomenon, the open chromatin.

22 I think a good place to look at what the patent does
23 is take a look at Pages 6 and 7 of their brief. They kind of
24 acknowledge this is basically directed to nothing more than a
25 natural phenomenon.

1 They have this discussion of something they call
2 epigenetics. And one of the things they say epigenetics can be
3 is when a protein is wrapped around, excuse me, when DNA is
4 wrapped around a protein.

5 They say, for instance, epigenetics is a study of
6 modifications to a chromosome that impact what Heuser
7 transcribed to Messenger RNA which can then be expressed as
8 protein. And they go on. They say one such modification is
9 the wrapping of DNA around protein.

10 And then they say on Page 7, what can we do? The
11 claimed inventions overcome limitations by allowing the
12 accurate genome-wide interrogation of chromatin regions of DNA.

13 THE COURT: All right.

14 MR. WALTER: So what they're saying --

15 THE COURT: One last question so I can understand
16 this.

17 MR. WALTER: Sure.

18 THE COURT: How does tagmentation relate to the
19 chromatin?

20 MR. WALTER: Tagmentation, in and of itself, doesn't
21 relate to chromatin, okay. What they've done is they've taken
22 their discovery about the natural phenomenon that a transposon
23 will, in fact, interrogate the open chromatin, they just
24 plopped that on to the tagmentation process. That's what
25 they've done.

1 They're using tagmentation to refute conventional
2 prior art process to observe the open chromatin through the
3 natural phenomenon that tagging -- that the chromatin transpose
4 on will in fact tap the open chromatin.

5 THE COURT: I know what a protein is, I know what an
6 enzyme is, I know what chromosome -what's chromatin? What is
7 it?

8 MR. WALTER: Okay. So an enzyme is a type of
9 protein.

10 THE COURT: I know it's defined in these patents.
11 But what is it?

12 MR. WALTER: So chromatin, I can take a look at Slide
13 54, okay, this gives you a description of what chromatin is.
14 If you take the image on the left, which is the chromosome,
15 that's a tight structure which has got two arms and two legs.

16 And if you look in the middle panel, which refers to
17 closed chromatin, that's what you would see if you could zoom
18 in on the chromosome and look at a little tiny region of the
19 chromosome.

20 THE COURT: Is that a cross-section, is it made up of
21 discs that go all the way up the leg?

22 MR. WALTER: Exactly.

23 THE COURT: Okay.

24 MR. WALTER: What you would see is you would see the
25 DNA, that's the line.

1 THE COURT: Right.

2 MR. WALTER: And if you wrapped around these proteins
3 that are shaped like a barrel, that's how the chromosome is
4 packaged in nature.

5 THE COURT: And what's the advantage of opening it?

6 MR. WALTER: The advantage of opening, the reason
7 that the cell needs to open it and string it out, is because
8 there's going to be enzymes and other proteins that are going
9 to be responsible for reading that DNA. And if the DNA is
10 wrapped around the protein, all tight and bundled, it can't go
11 in and read that DNA and use it.

12 So the cell has machinery. When it wants to extract a
13 certain gene, it goes in and opens up that gene and makes it so
14 that the other machinery in the cell can go in and get to it.

15 And the inventors, they made a discovery, and it's
16 not really a surprising discovery at all, that when the cell
17 opens up the DNA so that the other enzymes and proteins can get
18 to it, then a transposon would go and upset DNA. That's what
19 they discovered.

20 THE COURT: Okay, understood.

21 MR. WALTER: And like I said, on Slide 56, that's
22 what they claimed is their invention, that discovery, they just
23 plopped that on top of the prior art tagmentation process that
24 was routine and conventional. And so why are we using this
25 commercial kit?

1 Slide 57, this is worth noting, this is a tweet from
2 one of inventors. And they could criticize us for citing this,
3 but I think this is relevant. What this shows and what this
4 speaks to is the routine and conventional nature of this
5 process within in these claims, okay.

6 The inventor says, attack seek. And so that's the
7 name that they've called it, so the method in this patent, they
8 call it attack seek. He says it's so easy that anybody can do
9 it. And the reason it's so easy that anybody can do it is
10 because all it is is taking a routine and conventional Illumina
11 tagmentation kit off the shelf and then applying it to open
12 chromatin.

13 And the discovery that will potentially work on open
14 chromatin is nothing more than a recognition of the fact that a
15 transposon will, in fact, work on DNA and the cell will open it
16 up and sting it out so that it can react just like protein.

17 THE COURT: Well, well he says it's so easy to do it,
18 anyone can do it, he's talking about an attack sequence --

19 MR. WALTER: Attack seek. And attack seek is the
20 name that they've given to the alleged invention in the
21 patents.

22 THE COURT: All right.

23 MR. WALTER: I don't think they're going to dispute
24 that. But attack seek, that's the method by which this --
25 that's the name by which this method is known.

1 THE COURT: Okay.

2 MR. WALTER: Yeah. They won't dispute that. All
3 right. So that's the background.

4 I'd like to start on Alice, Step 1, now. Now like I
5 laid out, the alleged invention here is not an invention at
6 all. It's a discovery, okay. If you look at the patent, the
7 patent basically acknowledges that.

8 The inventors say, in their patent, we hypothesize
9 that a transposon would interrogate regions of accessible
10 chromatin. That's the open chromatin. They were right, okay.

11 They never even say it's a surprising discovery. But
12 they were right.

13 THE COURT: So are you saying, all of what is here
14 are found in the nature, so to speak, is a natural phenomenon?

15 MR. WALTER: Yes.

16 THE COURT: Is that --

17 MR. WALTER: What they contend is the alleged
18 mentioned is nothing more than a natural phenomenon. And they
19 acknowledge it. They acknowledge it because it characterizes
20 the discovery.

21 THE COURT: That's Alice Step 1.

22 MR. WALTER: That's Alice Step 1. It characterizes
23 the discovery about what happens in nature.

24 It's not like they said, hey, we figured out a way to
25 access the opened chromatin. And we did it by going out and

1 coming up with a new type of enzyme. We re-engineered the
2 transposon.

3 And when we re-engineered the transposon, it had this
4 wonderful property. No, it's just any transposon. They say
5 you can use anyone in nature. And they say, guess what, it
6 works when the chromatin is open and it's exposed it works.

7 THE COURT: Now what about their tags? What does
8 their tags add to the process?

9 MR. WALTER: It's not their tags. Their tags are
10 actually prior art that you buy off the shelf from Illumina.
11 Which is repeated conventional.

12 THE COURT: Okay.

13 MR. WALTER: So it's not their tags.

14 THE COURT: Okay.

15 MR. WALTER: I think they would admit that. And I
16 don't think they can say it's their tags.

17 THE COURT: All right.

18 MR. WALTER: So if you look at Slide 60, when you
19 have this situation, when you have intentions, "inventions,"
20 when you have alleged inventions that are boiled down to
21 nothing more than a natural phenomenon, a discovery about
22 something, those are suspect. Those are ineligible for patent.

23 You can't just take a discovery by the natural
24 phenomena and then tack on a bunch of routinely conventional
25 steps when the specification acknowledges that something is

1 based on discovery. That's a red flag. Something that's
2 ineligible for patent.

3 And if you look at Slide 61, it doesn't matter who
4 groundbreaking the discovery is. It can be a groundbreaking
5 discovery, you can't patent it by tacking that discovery and
6 just packing on routine and conventional steps. No matter how
7 groundbreaking. That's the Roach case. That's also the Ariosa
8 case.

9 So what is their response to this? If you see Slide
10 62, their response is that certain steps in these claims are
11 not found in nature. Okay. And you can see that here, in
12 stating the certain enzyme is not found in nature, they say
13 certain tags are not found in nature. They say general
14 information is not found in nature. Okay.

15 And they just throw out a bunch of steps that are
16 legibly not found in nature. That argument doesn't work. It
17 doesn't state the claims what every other step in the claim is
18 routinely convention.

19 And I think a really good illustration of this is the
20 CareDx. And if you look at Slide 63 I want to, this really
21 illustrates why that argument they're making about non-natural
22 steps fails, it just doesn't work.

23 What I'm showing on Slide 63, you know, and the text
24 is small. Because the claim that was at issue in the CareDx
25 case, it was a DNA case. And it included a number of non-

1 natural steps in a very highly complex claim.

2 In Step A the first thing it requires is a human
3 kidney transplant recipient. It's hard to think of anything
4 more non-natural than a kidney transplant. Step A, this claim
5 required a kidney transplant. Step B required extraction DNA
6 from the plasma sample. A non-natural step. Step C required
7 that you perform DNA amplification. A non-natural step. But
8 also required that you directed amplification from 1,000 single
9 nucleotide polymorphisms.

10 Okay? So you had to design an experiment that would
11 amplify DNA from 1,000 particular types of regions of the
12 chromosome. You had to PCR, that's unnatural. You had to
13 perform a high throughput sequencing reaction. You had to do
14 it by sequencing by synthesis. And it had to have an error
15 rate of less than 1.5 percent. And as you get sequences from
16 the high throughput sequencing reaction you had to quantify an
17 amount of DNA coming from the kidney transplant donor.

18 So all of these steps, non-natural. Every step in
19 here is non-natural. These claims were held invalid as being
20 directed to a natural law under Section 101, despite the
21 presence of so many non-natural steps because if the federal
22 circuit held that these steps were routine and conventional.

23 That's what we have here. If you take a look at
24 Slide 64.

25 THE COURT: Are we at Step 2 now?

1 MR. WALTER: We're not quite at Step 2. We're going
2 to finish up on Step 1 and then we'll get to Step 2 pretty
3 quick here.

4 But I just want to reiterate that as the law makes
5 clear on Slide 64, you can't just tack on routine conventional
6 activities. That's the Alice case. That's Page 225 of the
7 Alice case.

8 Here, just a reminder, Slide 65. The specification
9 tells you that the steps in the claims are doing tagmenting,
10 are routine and convention.

11 Tagmentation kits are commercially available from
12 Illumina. And the specification doesn't even tell you that you
13 have to do any sort of special steps in order to use those kits
14 for their alleged invention, just the opposite.

15 It tells you on Slide 65 that those kits can be
16 readily adaptable. The patent doesn't tell you that there is
17 anything special you need to do, it just says readily adapted.

18 In other words, use them off the shelf, apply it to open
19 chromatin and it will work.

20 Slide 66 I think is worth just a moment on. Slide 66
21 is something that refers to an insertional enzyme complex. Now
22 if you read the briefs you probably saw that they said, hey,
23 our claims refer to an insertional enzyme complex and that's
24 not found in nature. And so therefore our claims must be
25 eligible for patenting Section 101.

1 And they said also, insertional enzyme complex, there
2 is a dispute about the construction of how, there is a dispute
3 about how that term should be interpreted. And I think it's
4 worth pointing at because this really shows, I think, the
5 weakness of their position on it.

6 Okay. The insertional enzyme complex, the say not
7 found in nature. Well, actually, it mostly is found in nature.

8 The only thing that's different about the natural insertional
9 enzyme complex, the one that you find in the Illumina kits is
10 the pads.

11 But the more important point is that the insertional
12 enzyme complex, it's routine and conventional. The patent
13 tells you --

14 THE COURT: What does it do? What does it do?

15 MR. WALTER: The insertional enzyme complex is, if
16 you go back to Slide 51, those are the gray things with the,
17 those are the gray enzymes and the blue and green tags. That's
18 the insertional enzyme complex. That's the prior art component
19 that Illumina sells with its tagmentation case.

20 THE COURT: Okay.

21 MR. WALTER: And what the patent tells you, on Slide
22 66, is that we didn't invent that. That was described in a
23 variety of publications. Not just one, not just two, it's not
24 even by us, but it's a variety, here is a few examples. Okay.

25 And so, the specification admits that it's routine

1 and conventional. So this is of the category of step, just
2 like the ones we looked at in CareDx that doesn't save your
3 claim.

4 Now as to their argument about, what does insertional
5 enzyme complex mean, there is a dispute about that. Well no
6 there is not. It's defined. The patent defines it. The
7 patent gives a definition for it. There is no dispute about
8 it.

9 This is the definition that controls. And there is
10 no contention that anywhere on our argument we misapply this
11 definition or use an interpretation of insertional enzyme
12 complex that is contrary to what the specification teaches.

13 And you can see here this is corresponding to the
14 gray. As used herein, refers to a complex comprising of
15 insertional enzyme into adapter molecules. That's the gray
16 with the blue and the green.

17 The other argument they've made on Slide 67 is that,
18 well, you can't consider the fact that -- Did you have a
19 question?

20 THE COURT: No. Go ahead.

21 MR. WALTER: Okay. The other argument they've made,
22 and you can see this on Slide 67, is that you can't consider
23 whether certain steps are routine and conventional in Step 1.
24 That's wrong.

25 If you look at the CareDx case that we just looked at

1 they tell you flat out. They addressed that point directly
2 they say. The federal circuit states they have repeatedly
3 analyzed conventionality in Step 1. And they cite numerous
4 cases to that effect.

5 And as a matter of logic, it can't be that you don't
6 analyze routine and conventional steps in Step 1 because if you
7 did, if you could image a world where you could tack on non-
8 natural but routine and conventional steps to satisfy Step 1,
9 if you could do that then you would never get to Step 2. And
10 every patent would just tack on routine and conventional,
11 albeit non-natural steps with surviving the Alice inquiry.

12 And we know in the Supreme Court, in Alice, Page 225,
13 that we don't turn to ineligible concept to do an eligible one
14 just by tacking on the gene and conventional steps.

15 Okay, so that's Alice Step 1. Alice Step 2 we get to
16 the question of, what is the invented concept. And what I
17 would submit is that we are in the exact same spot we are in
18 with regard to the Brenner patents where if you look at their
19 patent, excuse me, if you look at their brief they don't
20 actually tell you what the inventive concept is, okay? They
21 spend about a page on it. And it's superficial and there is no
22 detail. And they never come out and say, here is what the
23 inventive concept is.

24 THE COURT: You mean in their brief?

25 MR. WALTER: In their brief, that's right. And I

1 think it's at Pages 12 and 13. They spend about a page on it.

2 And they never give any sort of explanation as to what the
3 inventive concept is. And that's because, to the extent there
4 is anything, and I'll put it in air quotes again, "inventive,"
5 it's the discovery itself.

6 And they can't say that the inventive concept is the
7 notion that a transposon will in fact do its thing on open
8 chromatin because that's a natural phenomenon. So since they
9 can't point to that, but they end up pointing to is nothing.

10 Now the other steps in the claim, and I think this is
11 true for all the patents, all the other steps in the claims are
12 just routine and conventional steps, for the way the
13 tagmentation and the patent tells you those are routine and
14 conventional. It says, methods for tagmenting isolated genomic
15 DNA are known in the arts and they're commercially available
16 from Illumina and other vendors. In other words, they're
17 routine and conventional.

18 On Page 71, I'm showing you the CareDx case. The
19 CareDx case tells you that when a patentee says in his
20 specification you can use commercially available methods, that
21 means it's routine and conventional. That's exactly what the
22 federal circuit relied upon in the CareDx.

23 Defined all those steps that we looked at that were
24 non-natural, but were routine and conventional and didn't add
25 anything to the Section 101 analysis, was the fact that they

1 were commercially available.

2 Now, in terms of the different claims, all the
3 dependent claims, what you typically see in these cases, and
4 Mr. Reines addressed them as the Brenner patents. You see the
5 same stuff with the Buenrostro patent.

6 Which is that you have a claim that lays out many of
7 the details of the invention. And then you look at a dependent
8 claim, and the dependent claim specifies something that's
9 similarly routinely and conventional like, you use messenger
10 RNA. Or you add a florescent pad. Okay?

11 But that's typical. Is that you see these cascades
12 of dependent claims that don't actually add anything to the
13 invention, they just tack on routine and conventional steps.

14 You know, it's criticism that we didn't do the
15 analysis of those claims. And that's not right. If you look
16 at our brief, we walkthrough and we identify these dependent
17 claims and we state why these dependent claims don't add
18 anything. And we explain why they're just routine and
19 conventional.

20 So for instance, if you look at Slide 73, this is
21 where it starts. We walkthrough these dependent claims and we
22 identify the evidence that establishes that these things are
23 routine and conventional. We identify the claims, which it
24 applies.

25 So for instance, Slide 74, they got some claims that

1 require that you use DNA sequencing. Well, DNA sequencing is
2 routinely conventional. We know that because the specification
3 tells you, go out and use the Illumina method or the 454 or the
4 Life Technologies, and oh, by the way, here is ten other
5 methods to add in your sequencing.

6 Slide 75. Some claims are directed to the TN5
7 transposase. The specification tells you that's routine and
8 conventional too. It's in the prior arts. Previously
9 described, here is the publication for 2010 for actually 1998,
10 that describes the TN5 transposase. So that's not new.

11 Barcodes. Slide 76. The following reference applied
12 guidance for selecting sets of barcode sequences. And they
13 give you a whole slew of references. That's routine and
14 conventional.

15 And I think what's notable, what's really I think
16 critical for Step 2 is they haven't pointed through an
17 inventive cons. They haven't identified what that is. And
18 they haven't, you know, they've said certain steps are not
19 found in nature, but they haven't actually identified any step
20 that they think is new that's not routine in the convention.

21 They basically, in my view, I think acknowledge that
22 these steps are in fact routine and conventional. And that's
23 why in Step 2 these patent claims fail as well.

24 If, Your Honor, doesn't have any questions I can hand
25 it over and then I'll respond.

1 THE COURT: Well, there are a lot more dependent
2 claims.

3 MR. WALTER: There are dependent claims. And like I
4 said, if you look at our brief we made an effort to try to
5 address them all.

6 THE COURT: It looks like there is 22.

7 MR. WALTER: There are in this patent. And then
8 there is some in the other patents as well. And like I said --

9 THE COURT: Wait a minute, I'm looking at the 995.

10 MR. WALTER: That seems right. That wouldn't
11 surprise me --

12 THE COURT: Okay.

13 MR. WALTER: -- it's 22. And like I said, we tried
14 to address those in our brief by identifying that those
15 concepts were in those claims and why there were two in
16 conventional.

17 And I think the really important point about that, we
18 had that in our brief and they had an opposition brief and they
19 never came back, and they never said, here's the thing, here is
20 the thing that's not routine and convention, that's the plus
21 that's something more. And they never identified anything that
22 was in the inventive concept in their one page response on
23 Alice Step 2.

24 THE COURT: Okay.

25 MR. WALTER: So we actually did do the analysis. We

1 addressed the claims and then they didn't respond. That's the
2 way things stand as far as I can tell.

3 THE COURT: And again, I probably asked this
4 question, but of the three claims --

5 MR. WALTER: Three patents?

6 THE COURT: Three patents. Let's see, the 981, the
7 013 and the 197. And I'm sorry, that's the Brenner. The 995
8 and the 207 and the 357.

9 MR. WALTER: 85 -- 857.

10 THE COURT: Yes. What is it?

11 MR. WALTER: I think it's 857.

12 MS. JACOBS: 357.

13 MR. WALTER: 357, okay. My mistake.

14 THE COURT: 357. What's the difference between them?

15 MR. WALTER: Very little difference. If you look at
16 all the independent claims they all are directed to the basic
17 concept of interrogating open chromatin using the natural
18 phenomena that a transposon will in fact do its thing on open
19 chromatin and act on prior art steps from the Illumina
20 tagmentation kits, or any other tagmentation method that was
21 out in the art. They just tack on those steps.

22 And the only variations are slight differences, you
23 know, in terms of like language choices. Like, some of the
24 patents require an insertional enzyme complex. Other patents
25 simply refers that to an insertional enzyme complex they refer

1 to a TN5 transposase complex. So they change the language a
2 little bit.

3 But in terms of the substance on those independent
4 claims, I don't really believe there is anything that's
5 material. They haven't come along and identified something
6 that they thought was really material in terms of differences
7 between any of the independent claims nor have they done so for
8 any of the dependent claims as well.

9 THE COURT: Okay. Thank you. Are we back to Mr.
10 Groombridge?

11 MR. GROOMBRIDGE: Yes indeed, Your Honor.

12 THE COURT: All right.

13 MR. GROOMBRIDGE: I'll round up all the papers I have
14 in front of me here.

15 THE COURT: I have a sense you disagree with your
16 opponent.

17 MR. GROOMBRIDGE: Surprisingly, Your Honor, I do
18 disagree with my --

19 THE COURT: All right.

20 MR. GROOMBRIDGE: -- opponent.

21 THE COURT: Go ahead.

22 MR. GROOMBRIDGE: Let me just start by, the, I think
23 with the last question Your Honor asked, what's the difference
24 between the three patents. And by the way, I'm going to call
25 them the attack seek patents as a way of --

1 THE COURT: They what?

2 MR. GROOMBRIDGE: The attack seek patents. So that
3 we don't have to get into all the, the Buenrostro patents or
4 the Geraci (phonetic) patents, right? They're patents.

5 This much I think we can agree on that they are
6 directed in general to this technic that is known as attack
7 seek. And I'll talk about it.

8 So the first one, the 995 patent, is for a method of
9 analyzing the biological cell. And that's taking what these
10 inventors came up with and using it to analyze something. And
11 I'll get into that.

12 The second one, the 207 patent is for, it's a method
13 for generating a sequence library. And library in this usage,
14 in the genomics field, doesn't mean a collection of books, it
15 means a set of fragments, usually DNA fragments, that are going
16 to be used for something else downstream. And generating a
17 sequence library means a method of preparing that pool of
18 fragments.

19 And the reason why that's important is the case law
20 draws a distinction, it can be a critical distinction, between
21 a method of preparing something, on the one hand, and for,
22 example, a method of diagnosis on the other hand. And if Your
23 Honor were to look, for example, at the Illumina v. Ariosa
24 case, cited in the brief. And I think the relevant part is 967
25 F.3d. Pindsight is 1325.

1 What that does is, say that patent was upheld because
2 it was to a method of preparation as opposed to a method of
3 diagnosis. And so what the claim is directed to can be
4 critically important in this 101 context.

5 And the third of the patents, the 357, is to a
6 composition of matter. Uniquely amongst the six patents in
7 this lawsuit, it's not about a method it's about a thing.

8 THE COURT: About what?

9 MR. GROOMBRIDGE: It's about what patent laws call a
10 composition of matter. A method is a series of steps. A
11 composition of matter is something that can sit on a desk in a
12 jar.

13 And in our view, and we put this in our brief, that's
14 important because as far as we call tell there is no case,
15 ever, that has held a composition of a known matter, a
16 composition of matter patent, to be invalid under Section 101.

17 And indeed there is a Supreme Court case, which the patents
18 lawyers call a Myriad case, but it's the association for
19 molecular pathology versus Myriad in which the Supreme Court
20 holds that non-naturally occurring DNA is patent eligible
21 because it doesn't occur in nature. And so --

22 THE COURT: And what's the year of that opinion, do
23 you know?

24 MR. GROOMBRIDGE: I want to say it was --

25 THE COURT: Within --

1 MR. GROOMBRIDGE: -- 2015 but I have the body of
2 papers right here, and it's 2013.

3 THE COURT: Okay.

4 MR. GROOMBRIDGE: And the citation is 569 U.S. 576.

5 THE COURT: Okay.

6 MR. GROOMBRIDGE: And I'm happy to get into it a
7 little bit more --

8 THE COURT: No. The Supreme Court has decided so
9 many patent cases in the last ten years that they set a record.

10 MR. GROOMBRIDGE: They developed predilection for it.

11 THE COURT: That's for sure.

12 MR. GROOMBRIDGE: And that was good for business for
13 us because it meant that there was lots of certainty.

14 THE COURT: Well, the Alice case certainly --

15 MR. GROOMBRIDGE: Yes.

16 THE COURT: -- was an important one.

17 MR. GROOMBRIDGE: It was indeed, Your Honor.

18 THE COURT: Yes.

19 MR. GROOMBRIDGE: And so, in our view the differences
20 between these two patents are critical to the Section 101
21 analysis. Just in terms of what each one of the three is
22 targeted to in its claims.

23 Now, let me turn to the substance of what did these
24 inventors come up with. And maybe it makes sense to walk
25 through, what was the problem they were trying to solve here.

1 And I might use Mr. Walter's slides.

2 THE COURT: What page?

3 MR. GROOMBRIDGE: Starting at, let's say the one
4 that, yes, at Slide 54. Which has the --

5 THE COURT: Chromosome?

6 MR. GROOMBRIDGE: -- chromosome and the closed and
7 open chromatin. And so the, and I think we're going to
8 probably agree on this, that the chromosome is a structure,
9 which we see there, it looks kind of X shaped, and it's got
10 this protein, and wrapped around it is DNA. And that
11 compilation altogether is chromatin.

12 And the chromatin, when it's tightly wound up, the
13 DNA when it's tightly wound up in that chromatin, the cell
14 can't use it. It's, I often, when I'm explaining this say that
15 the, you might think of DNA as being the file copy of
16 information. And by contrast, RNA is the working copy.

17 And in order for the, and you making the working copy
18 from the file copy. You have to take the file copy out and
19 then copy it in order, and you can then use the thing you've
20 made.

21 And this is I'm sure simplistic. And I'm sure
22 scientists here would, I think they would all cringe. But the,
23 basically when the DNA is tightly wound up like that it's
24 preserved, it's protected, it's there. But it's not useable.

25 And sometimes things happen that cause it to become

1 useable by becoming open. And that way when it's out and more
2 accessible, other things within the cell can come along and
3 read it and say that particular piece of DNA is now accessible
4 as a gene. I can read that and I can take that information and
5 make it into a protein, which will then effect how the cell is
6 operated.

7 And it turns out that for scientists who are studying
8 all things cellular, including for example cancer research,
9 it's really, really important to be able to figure out when is
10 the DNA in this open accessible form as opposed to when is it
11 in the tightly wound up and readable form.

12 And the problem that these inventors are trying to
13 solve was to come up with a better way of answering their
14 question. And as these patents say, and as we put in our
15 brief, we did not hear mention in the Defendant's argument,
16 there were prior art methods for figuring out, well, what DNA
17 is now open.

18 But those prior art methods were unbelievably
19 complicated. And in the patent it talks about one that
20 requires 44 steps. And if you make a mistake at any one of
21 the, every time you do one of those steps you lose a little
22 bit, right? And so the effect is, if you have 44 steps you
23 have to start with a really large amount. So you can afford to
24 lose some 44 times.

25 And one of the consequences of that was you needed a

1 sample that might be 50 million cells in order to do this
2 analysis. Another consequence was it would take you days on
3 end in working your way in the lab. And not only is that
4 inconvenient, but if for example we're doing this in a clinical
5 context and we want to run a lab test so that a physician can
6 make a decision about what is the best treatment, a test like
7 that is worthless because by the time the result comes back the
8 physician has already treated and moved on and days, weeks have
9 gone by.

10 And so the invention that these gentlemen came up
11 with was a technic that was radically simpler, faster, cheaper
12 and better in every respect. We then went from a 44-step
13 method to a two-step method.

14 And they wrote, and this is in the, it's actually in
15 one of the papers that the Defendant attached, but they write,
16 and this is Exhibit 1 I believe, document 30, Docket Item 13-1
17 at Page 6 of 16, the inventor is speaking, we believe attack
18 seek offers substantial advantages over existing technology due
19 to its speed, simplicity and low input cell number
20 requirements. You can do this with a few thousand cells. We
21 might even, you can do it with one cell, not 500 million.

22 THE COURT: Do what?

23 MR. GROOMBRIDGE: And --

24 THE COURT: Do what?

25 MR. GROOMBRIDGE: Figure out what is open. What

1 pieces of DNA are open up so that the cell is reading them.
2 And for example, using that information to do something that
3 might promote the growth of a tumor. It's expressing some kind
4 of a growth factor that when it encounters a tumor it tails the
5 thing to go into overdrive. But that's the sort of information
6 you might want.

7 And this is, to the extent that the summary argument,
8 that because you make an invention that is enormously simpler
9 than what went before it must therefore be unpatentable. We
10 would suggest, Your Honor, that's just completely wrong. It's
11 not what the law is, right?

12 The fact that these inventors were able to take a
13 technic that had been so complicated as to being unuseable and
14 convert it into something that's in widespread use and wraps
15 all over the country every day, by simplifying that's the
16 result of their invention. And I'll talk about what their
17 invention is.

18 But to argue that it's routine and conventional, it
19 flies in the face of the facts that we have in the record. And
20 if this case goes forward, the effects I'm confident will be
21 developed.

22 And so, what I'd like to talk about now is what's,
23 well, what's tagmentation as it existed before this invention.

24 And I think -- I don't mostly disagree with what Mr. Walter
25 said. But what he didn't say was that no one was using

1 tagmentation for this purpose, they were using it for something
2 completely different.

3 And what they were using it for, if we look at, for
4 example, the Defendant's Slide Number 50, which is where Mr.
5 Walter started, you see it says, a DNA strand fragment the DNA
6 and then sequence it. That they were using, tagmentation was
7 being used as a way of doing that fragmenting process.

8 And it was being used on DNA that had already been
9 purified, it wasn't being used on a cell. Right? Your Honor
10 asked, is that in a cell. And this technic, in the patents, is
11 being applied to things in a cell.

12 By contrast, the tagmentation of the prior art is
13 being used to DNA that's been extracted from a cell, purified,
14 and isn't wound up on that, in a chromosome to form chromatin.

15 And I would, I wrote this down because Mr. Walter said there
16 was no reason to think that the transposal, and I think it's
17 actually a transposase, is not going to do its thing on the
18 open chromatin. It's not a surprising discovery, and he
19 several times used the phrase, do its thing. Meaning, that it
20 would actually be able to cut the DNA and tag it here.

21 I think what I would like to do is look now at his
22 Slide 55 and talk about, which is, again, this is where he
23 said, well, this is just a discovery. And I think he said that
24 this all happens in nature.

25 And let's just, to walk through what the inventors

1 are telling us here in this part of the patent. They say it
2 was hypothesized, the transposition by a purified TN5. A
3 prokaryotic transposase.

4 Now that's fancy biological speak, Your Honor, but
5 prokaryotic means it comes basically from a bacteria.
6 Prokaryotic is a single-celled organisms. And the biological
7 universe is divided into, at its most fundamental division,
8 into prokaryotic organisms, single-cells, like bacteria, and
9 eukaryotic organisms, everything that's more complex. Plants,
10 animals and human beings for example.

11 And we'll see here, it was hypothesized that that
12 prokaryotic enzyme, when applied to small numbers of unfixed
13 eukaryotic nuclei, in others, in this case human cells, would
14 interrogate regions of accessible chromatin. With that I think
15 is what Mr. Walter's means when he says, do its thing.

16 There is no -- There wasn't in the field, nothing, to
17 suggest that a bacterial enzyme would work on human cells.
18 Nothing. It had never been tried. And that's not what is
19 known in all of this tagmentation, had nothing whatsoever to do
20 with it.

21 And if this case goes forward I believe we're going
22 to hear a lot of evidence that that was unpredictable, no one
23 could have known it would work. And in fact, that lies at the
24 heart of what these inventors were able to achieve. The reason
25 that they could simplify from 44 steps to two steps was because

1 of this phenomena.

2 And did they patent this phenomena, no. They
3 patented the use of this phenomena. And that is exactly what
4 the patent system allows us to do.

5 And we heard a lot about, just said, this is just a
6 phenomena of nature and so on. And this enzyme, if you used it
7 on human cells, would do its thing. That's contrary to the
8 law. The law we laid out in our brief.

9 And I would point Your Honor to, I think the best
10 example of this is a case called Natural Alternatives versus
11 Creative Compounds. In which that's a, it's about what happens
12 when you give a particular natural compound to a human being.
13 And in order to produce certain effects. And the same
14 principle I would say applies here.

15 Among the things that the federal circuits said, for
16 example. Similarly the fact that the active ingredient in the
17 supplement is a molecule that occurs in nature and is consumed
18 as part of the human, is notable to our analysis.

19 The argument that the patent seemed invalid, because
20 they apply a compound that has natural biological activity.
21 The federal circuit said that flies in the face of the patent
22 act, which expressly permits patenting in new use of an
23 existing product.

24 And that is what we have here, new use of an existing
25 product. The tagmentation product. And to the extent --

1 THE COURT: All right, so, give me the cliff notes
2 version.

3 MR. GROOMBRIDGE: Yes. Of the case?

4 THE COURT: Of why it's not -- Of why this patent is
5 not --

6 MR. GROOMBRIDGE: What -- What these inventors --

7 THE COURT: -- natural phenomena?

8 MR. GROOMBRIDGE: What these inventors -- The cliff
9 notes version is that these inventors discovered that you could
10 take this insertional enzyme complex, and I think we have
11 agreement that that does not exist in nature, and you can put
12 it to a different use than it had ever been used for. And they
13 discovered they came up with a new use of that existing
14 product.

15 THE COURT: And what's the use?

16 MR. GROOMBRIDGE: The use is to figure out what DNA
17 is accessible and thus is being read by the body in a way that
18 is faster, cheaper and requires far, far fewer cells than the
19 methods that had been in use previously.

20 THE COURT: And going beyond that, what is, I'll call
21 it the plus, the plus?

22 MR. GROOMBRIDGE: Well, the plus is, as the inventors
23 --

24 THE COURT: Step 2.

25 MR. GROOMBRIDGE: -- themselves wrote, that it's --

1 THE COURT: Step 2.

2 MR. GROOMBRIDGE: Oh, what's the plus in the --

3 THE COURT: Step 2.

4 MR. GROOMBRIDGE: Oh. Well, the Step 2 asks, is this
5 routine and conventional. Well understood routine and
6 conventional.

7 And the answer to that, in our view, is exactly no.
8 Right? That as the inventors wrote the use, this technic
9 offers substantial advantages over existing technologies due to
10 its speed, simplicity and low input cell number requirements.
11 So it's anything but routine and conventional.

12 And to the -- There is a point, which I think Mr.
13 Walter's was making, that the laboratory technics, at least
14 some of them, are things that were already in use. And what I
15 hear us to be arguing is that if you come up with a new method
16 that uses technics that have already been employed, then
17 necessarily it must fail Step 2. And that, again, is contrary
18 to the law.

19 Let me read something from that Illumina v. Ariosa
20 case. And talking about conventional technics. And we
21 recognize, of course, that the inventors of the two patents did
22 not invent centrifugation, chromatography, electrophoresis or
23 nanotechnolgy.

24 But conventional separation technics can be used in
25 unconventional ways. And that is the key point here, right?

1 That merely because you are using the tools of the trade,
2 doesn't mean that what you are using them for is necessarily
3 routine and conventional.

4 Of course we're using test tubes that existed before;
5 that doesn't mean that the method is routine and conventional.

6 What these people came up with is a method that solved the
7 problem with elegant simplicity. And that's, by the way, what
8 the tweet is about. That's what it means when it says anyone
9 can do this.

10 And in doing so they greatly improved the use of,
11 they came up with a technic that is now in widespread use
12 whereas previously the prior art methods, the 44 step methods,
13 are so complicated no one used them. And they made possible a
14 whole body of research that would never have happened but for
15 their invention. And that they used in part, technics that
16 existed in the laboratory, doesn't take away from the inventors
17 this one iota.

18 Your Honor mentioned one of the cases, not by name,
19 but the case about gravity. And that's an old Supreme Court
20 case called Eibel Process from 1923. That was a case about a
21 papermaking process.

22 And the inventor in that case changed the process by
23 changing the angle of one part of the machine by about, I think
24 15 degrees. And I think as a matter of fact, Your Honor, what
25 he actually did to accomplish that was put a brick under the

1 piece of the machine. Lifted it up a bit.

2 And by doing that, it enabled a huge increase in the
3 throughput of the machine. And arguments were made, well, it's
4 so simply it can't be an invention. And the courts, all the
5 way up to the Supreme Court, rejected those arguments because
6 sometimes simplicity is exactly what's invented.

7 You go from a 44 step process to a two-step process
8 here. Is precisely what illustrates the inventiveness of it.

9 I'll pause there and see if Your Honor has questions.

10 THE COURT: So along the lines of that case, I know
11 you cited it in your brief, but related to this situation,
12 relate the phenomena to this situation.

13 MR. GROOMBRIDGE: Well, so, it turns out, and I'm
14 still looking at Mr. Walter's Slide Number 55, it turns out
15 that you can, that this bacterial enzyme actually can work on
16 human chromosomes. And we can get into an argument about
17 whether that is or isn't a natural phenomenon. And I think the
18 law says that that's actually not a natural phenomenon.

19 In nature the human body, there is no showing anyway
20 that that bacterial enzyme would ever come in contact with
21 anything in my body. I'm not sure that that is a natural
22 process, it never happens. It's along the lines of if I take
23 it and I drop it.

24 Somebody finds something in a tree bark in the Amazon
25 Jungle it turns out it cures Alzheimer's. The thing in the

1 tree bark is natural and when you give it to people their
2 bodies act on it in a natural way, doesn't mean it's
3 unpatentable, right?

4 But in this instance what these people, they
5 discovered that biological mechanism, and then they put it to
6 use. And that's exactly what the patent system protects.

7 And the fact that they used, for example,
8 commercially available kits that had previously been used for a
9 different application doesn't take away from the invention. We
10 look at Mr. Walter's Slide 65. This talks about the
11 tagmentation.

12 And it says, the methods for tagmenting isolated
13 genomic DNA known in the art. That isolated genomic DNA means
14 purified DNA, not in a human chromosome. No one had ever
15 dreamed of the idea that you could take these kits and apply
16 them to a human chromosome. There's a new use. One apparently
17 undreamt of.

18 And by the way, just while we have this, there's a
19 debate in the, what you see there at the bottom, such systems
20 may be readily adapted for use herein. There's a debate in the
21 briefing about what readily adapted means.

22 I was reminded in that debate, Your Honor, about
23 something that I learned in law school where I remembered a
24 professor saying, what is the one thing we know about a quasi-
25 contract. The one thing we know is it's not a contract.

1 When something can be readily adapted, that might be
2 a lot of work or it might not be much work but it tells you
3 it's not the same thing, right. It has to be adapted in some
4 fashion for use.

5 And what these inventors did was they took this
6 tagmentation kit that was available for a different use and
7 adapted it for use in their invention here. And that's
8 precisely the type of thing that the patent system wants to
9 encourage in their work.

10 And so, I think where, you know, what we have in the
11 challenge to the patent, these patents, is essentially an
12 exercise in hindsight saying, I can look at this and break this
13 apart for a series of pieces and say, I can find all of these
14 pieces in the laboratory. Or I can call up and order them.
15 Well, one of them is an enzyme, it does its thing.

16 That's not how we look at patentability. We look at
17 what was the problem that these people saw and how did that
18 solution advance the field. Was it routine and conventional.
19 And the answer is, this is absolutely, it's the very opposite
20 of routine and convention. It transformed its field and it did
21 it with elegance and simplicity which is a key to why it's an
22 invention.

23 THE COURT: If I look at the, I guess it's the
24 summary --

25 MR. GROOMBRIDGE: Yes.

1 THE COURT: -- in the patent, I'm looking at the,
2 which patent, the 995? Is that the right one? I believe so.

3 MR. GROOMBRIDGE: The 995 would be a good one to
4 start with, Your Honor.

5 THE COURT: Oh, I'm looking at the wrong one. Yes,
6 the 995. I mean, I look at the summary, right?

7 MR. GROOMBRIDGE: Yes, Your Honor.

8 THE COURT: Is there any language in here about
9 speed, efficiency, et cetera?

10 MR. GROOMBRIDGE: I don't think that that is in the,
11 the summary is talking about how you do it. I think those
12 things are results of it. But I think those descriptions are
13 the benefits of the invention are to be found in the patent.

14 THE COURT: All right.

15 MR. GROOMBRIDGE: For example, right above that, when
16 it's talking about the need to avoid samples, I'm looking at
17 about Line 31, while published protocols exist, these methods
18 require millions of cells. Complex and time consuming sample
19 preparations and cannot simultaneously probe the interplay of
20 nucleosome positioning, chromatin accessibility to finding.

21 And then it goes, and so they're problematic in three
22 major ways. And so, delaying out the problem that they solve,
23 a fair reading of the patent, to me, is to say, I set out to
24 solve those problems and here's how I solved them.

25 THE COURT: Okay. All right. Rebuttal by Mr.

1 Walter?

2 MR. WALTER: Yes. Thank you. All right, so, it
3 seems clear now that what they think the invention is, is
4 applying the prior art tagmentation process to what they call
5 open chromatin in the context of the step.

6 The question now is, whether that kind of a new use
7 is something that is eligible for patenting or is not. And our
8 position still is that it's not. And the reason it's not is
9 because all it is, is the natural phenomena of an enzyme,
10 transposase enzyme being able to operate on open chromatin,
11 which the patent doesn't even characterize as surprising, with
12 routine unconventional steps.

13 Now I think what really speaks volumes on this is,
14 one of the points Mr. Groombridge was finishing up on, which is
15 Slide 65. Slide 65 talks about how the methods of the
16 invention can carry it out by using sequencing kits that are
17 available from Illumina. And he said there is a dispute on
18 what it means when the specification tells you that you can
19 just take those kits and "readily adapt them."

20 Now, if they were anything other than routine and
21 conventional use of these kits off the shelf, you can be
22 certain Mr. Groombridge would be telling you about those
23 additional inventive steps and the hoops the inventors had to
24 jump through and the creativity they had to exercise in order
25 to use those previous kits in order to make their natural

1 phenomena they discovered about transposases as being able to
2 work on open chromatin work with those kits. And he didn't
3 identify a single one. Not one.

4 This is a classic case where all you have is a
5 natural phenomenon and then they plopped it on top of prior art
6 tagmentation.

7 Now one of the things I thought I was very
8 interesting that he also went to, was the fact that the, I
9 think it's on the slide regarding the hypothesis, on Slide 59.

10 He said, TN5, he says that's a bacterial transposase. And
11 this phenomena that a bacteria transposase would work on a non-
12 bacterial chromosome was surprising. And that might not even
13 be a natural phenomenon, Mr. Groombridge said.

14 But what is, I think, really noteworthy about that
15 argument is that the overwhelming majority of their claims
16 don't require this bacterial transposase working on non-
17 bacterial chromosomal DNA. The overwhelming majority of their
18 claims are completely silent on this.

19 They didn't even identify a single claim that
20 eventually, that allegedly requires this kind of funny
21 combination. In fact, the specification on the claims, see,
22 you can do this with any transposases. So this is not an
23 invention that's wrapped up in a surprising discovery about
24 what a bacterial transposon would do with regards to human DNA.
25 Not at all.

1 The specifically tells you, you can use any
2 transposase. And the claims are overwhelmingly not limited to
3 a particular type of transposase. So it's just kind of
4 surprising that that was the argument that would be made there.

5 THE COURT: But what about the tags they're putting
6 on their product?

7 MR. WALTER: The tags? They're not putting tags on
8 the product; Illumina put the tags on the product. That's a
9 routine and conventional process that was part of the
10 tagmentation process. That's not their invention. They never
11 said it was. That's just a routine and conventional prior art
12 process.

13 It's no different than the amplification of DNA or
14 the sequencing of DNA that you saw on the CareDx process. This
15 is like CareDx. You can have a new use of a discovery, but you
16 just can't patent the discovery itself and you can't do nothing
17 but tack on routine and conventional process. These wholesale.
18 And that's what's done here.

19 So the patent tells you. The patent tells you, go
20 take the prior art kit, the Illumina prior art kit and use it,
21 you can readily adapt it. And we haven't heard any disclosure
22 from them, any argument regarding special steps, new
23 adaptations, creativity, problems that had to be overcome. In
24 fact, what the patent is telling you, when it says it can be
25 readily adapted, is you use it off the shelf.

1 Now --

2 THE COURT: Well, are they creating a system that
3 will take millions of cells, as it says here, as starting
4 material, complex and time consuming sample preparation and
5 simplifying the method of separating the chromatin so you can
6 get access to the DNA?

7 MR. WALTER: Okay, they didn't create a new process
8 for that, they used an old process. And what they did was they
9 tacked on the natural phenomenon onto the old process. The
10 natural phenomenon was that the transposase would in fact
11 operate on prior art, on open chromatin. And they just used
12 the old process.

13 That's the classic situation where you can't claim
14 something because all you're doing is tacking on conventional
15 steps with the natural phenomenon. I think, I want to address
16 the improvement point that they raised because the point about
17 whether the natural phenomenon offers an improvement, it's
18 happened in the past where people make a discovery about a
19 natural phenomenon, and that natural phenomenon offers great
20 improvement to the practical procedures.

21 But if you try to patent that natural phenomenon by
22 just tacking on routine and conventional steps, it doesn't
23 work. Let me give you a good example of that.

24 A good example of that is the Ariosa case from 2015.
25 Okay. And I want to read what the court said in that case.

1 This is 788, F.3d, 1371.

2 And that was a case about cell-free DNA. Which is a
3 phenomena that when a women gets pregnant there is fragments
4 from a fetus floating around in the bloodstream. And the
5 person who made that discovery was able to revolutionize
6 prenatal care.

7 Here's what the court said in that opinion. Sequenom
8 also notes that "the method reflects a significant human
9 contribution in that Doctors Lo and Wainscoat combined and
10 utilized man-made tools of biotechnology in a new way that
11 revolutionized prenatal care."

12 The federal circuit, here's what the federal circuit
13 said in response to that. It says, we agree. The federal
14 circuit says, we agree that this discovery was able to
15 revolutionize prenatal care. But they went on to state, but we
16 note that the Supreme Court instructs that groundbreaking
17 innovative or even brilliant discovery does not, by itself,
18 satisfy the Section 101 inquiry.

19 So in other words, if you make a discovery and you're
20 able to apply that discovery in a way that improves something
21 or revolutionize something, it's not enough if all you're doing
22 is tacking on routine and conventional steps. And here we know
23 that's all that's happening.

24 We know that from Mr. Groombridge who was talking
25 about the rebel he adapted. And he didn't identify a single

1 step that was allegedly new, that had to be adjustment, that
2 was creative, that caused problems.

3 THE COURT: What about --

4 MR. WALTER: They just put the kit and, boom, used --

5 THE COURT: What about the, I'll simplify it, the
6 insertion that it's referred to? The insertion.

7 MR. WALTER: The insertion, that's just part of the
8 prior art tagmentation process. That's off the kit.
9 Tagmentation, that's what it is. That's the insertion. That's
10 what happened in the Illumina tagmentation process. Same
11 thing. That's what happens in the Illumina kit.

12 And all they did was take advantage of the fact that
13 in fact the transposase will work on the open chromatin to do
14 what it had done in the past on genomic DNA. That's a natural
15 phenomenon.

16 Now, you know, they also made this argument that they
17 have some claims that are directed to methods of preparation.
18 And that the Illumina case tells you that methods of
19 preparation claims are per se patentable. That is not why
20 that claim satisfied the patentability standard in Illumina.

21 What happened in Illumina, and this is something Mr.
22 Groombridge should have mentioned in his argument, the key
23 reasons I think those claims satisfy the patent eligibility
24 standard was because those claims included size thresholds for
25 analyzing DNA. They included a 500 base pair and a 300 base

1 pair size threshold.

2 And those were size thresholds that were selected by
3 people. It was based on ingenuity. Okay. It was a human-made
4 sized threshold that was engineered.

5 That, if you read that case, is why I think those
6 things ultimate survived the patent ineligibility analysis.
7 Not because someone took an otherwise ineligible method of
8 observing something and changed it to a method of preparation
9 claim. It's inconceivable to suggest that you could take a
10 method of observing something and then just change it so that
11 it's a method of preparation and all of a sudden magic happens
12 and it survives eligibility. No case stands for that
13 proposition.

14 THE COURT: All right.

15 MR. WALTER: So --

16 THE COURT: Go ahead. Why don't --

17 MR. WALTER: I think the bottom line --

18 THE COURT: -- you wrap it up.

19 MR. WALTER: -- I'm about to finish, I'm just going
20 to wrap up. I mean, the bottom line is, we all agree all this
21 is, is prior art tagmentation used with open chromatin. And
22 that last bit, using with open chromatin, it's just the natural
23 phenomenon that in fact transposase will work on open
24 chromatin. That's not patent eligible.

25 THE COURT: Okay. All right.

1 MR. GROOMBRIDGE: One thing. This is from the
2 natural alternatives case, 918 F.3, 1338. And the Pinsight is
3 1345.

4 The federal circuit speaking. The natural ability of
5 the subject matter to undergo the process does not make the
6 claim directed to that natural ability.

7 THE COURT: Read it one more time.

8 MR. GROOMBRIDGE: The natural ability of the subject
9 matter to undergo the process does not make the claim directed
10 to that natural ability. And what they're saying there is that
11 nearly because biochemical processes are involved doesn't mean
12 that the claim is directed to a natural phenomenon within the
13 meaning of Section 101. And that's what's wrong with the
14 argument that we just heard, Your Honor.

15 THE COURT: Okay.

16 MR. GROOMBRIDGE: Thank you.

17 THE COURT: All right. I'm glad I moved this up from
18 10:30.

19 (Laughter.)

20 THE COURT: I did it for unrelated reasons and it
21 turned out to be the right thing to do. So where we do we go from
22 here.

23 Now, I, after oral argument in a non-patent case I
24 may say to Counsel, or to Plaintiff's Counsel, look, you now
25 know what is being claimed as the weakness in your complaint.

1 The Third Circuit encourages us to allow amendments. And
2 rather than write an opinion and having to give a party the
3 opportunity to amend, if you want you can file an amended
4 complaint and see where it takes us.

5 I don't know, and then I usually say, if, maybe if
6 you send the complaint to the, your opponent before you file
7 it, maybe they'll agree it's a good complaint at this point and
8 they won't file a motion to dismiss, maybe file an answer. I
9 don't think that logic applies in a patent case. I don't see
10 that working here.

11 And so, I think I see a lot of head shaking here.
12 Not up and down, but horizontally. So I don't think that's
13 going to work here.

14 So it's more a question of, affording you the
15 opportunity to file any supplemental brief you want based upon
16 my questions, which I do in every, in a lot of cases. If the
17 parties want to give you another opportunity, just answer some
18 of my questions or to clarify something you said or focus in
19 more on what you said.

20 I usually tell counsel, order the transcript of this
21 hearing and agree. Both of you are good experienced lawyers.
22 I have a feeling you may have litigated against each other
23 before, so maybe you can agree on --

24 MR. REINES: We were partners --

25 THE COURT: Oh, okay. Maybe you can agree on a

1 specific date that you both receive the transcript, you know,
2 because when they receive it on a Thursday you may receive it
3 the following week. Just agree on a specific date and then
4 take two weeks to file supplemental briefs. I don't need
5 replies or responses just, you know, simultaneously two weeks
6 afterwards file a supplemental brief and then I'll make a
7 decision.

8 All right, would that work?

9 MR. WALTER: That's fine, Your Honor.

10 MR. GROOMBRIDGE: That's fine with us, Your Honor.

11 THE COURT: Okay.

12 MR. REINES: Yes, sir.

13 THE COURT: All right. So order the transcript then.

14 I'll get a copy of the transcript too. I always want to get
15 one.

16 And I'll just, the next thing that will hit the
17 docket is just an order affording the parties need to file a
18 supplemental brief in support of, or in opposition to the
19 motion to dismiss within two weeks of when you received the
20 transcript. It will be the only order you see on the docket at
21 this point.

22 All right, is there anything further anyone wants to
23 put on the record? This has been --

24 MS. JACOBS: I don't have any --

25 THE COURT: You got to speak into the mic now.

1 MS. JACOBS: I apologize, Your Honor. Do you have
2 any page limits in mind for the supplemental briefing?

3 THE COURT: Well, I don't want you to repeat
4 everything in the initial brief, that won't be helpful. But I
5 don't put page limits on briefs. I know some judges do, but I
6 let lawyers do what they think is in the best interest of their
7 client. All right? So there is no page limit.

8 MR. REINES: Happy Thanksgiving.

9 THE COURT: Same.

10 MR. GROOMBRIDGE: Thank you, Your Honor.

11 THE COURT: All right. I have nothing else, so I'll
12 stand in recess.

13 (Whereupon, the above-entitled matter went off the
14 record at 2:41 p.m.)

C E R T I F I C A T E

I, court approved transcriber, certify that the foregoing is a true and accurate complete transcript from the official electronic sound recording of the proceedings in the above-entitled matter.



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