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Transcript of Daniel W. Van Der Weide, Ph.D.

Date: April 21, 2025

Case: EndyMed Medical Ltd., et al. -v- Serendia, LLC (PTAB)

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IPR2024-00386

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

-----X

ENDYMED MEDICAL, LTD. AND
ENDYMED MEDICAL, INC.,

Petitioner,

CASE NO.: IPR2024-00386

-against-

SERENDIA, LLC.,

Patent Owner.

-----X



DEPOSITION OF

DR. DANIEL W. VAN DER WEIDE

NEW YORK, NEW YORK

APRIL 21, 2025

REPORTED BY: KIARA MILLER

FILE NO.: 576862

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

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4 ENDYMED MEDICAL, LTD. AND
5 ENDYMED MEDICAL, INC.,

6 Petitioner,

CASE NO.: IPR2024-00386

7 -against-

8

9 SERENDIA, LLC.,

10 Patent Owner.

11 -----X

12

13

14 Deposition of DR. DANIEL W. VAN DER WEIDE,
15 taken on behalf of PETITIONER, at REMOTE
16 LOCATION, New York, New York, commencing at
17 9:25 AM, APRIL 21, 2025, before Kiara Miller.

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

2
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14 BY: KYLE AUTERI, ESQ.

15
16 ALSO PRESENT:

17 ZOOM TECH, DAVID MIELCAREK
18
19
20
21
22

1 TECH MIELCAREK: Thank you to everyone
2 for attending this proceeding
3 remotely. Please remember to speak
4 slowly and do your best to not talk
5 over one another. Please be aware
6 that we are recording this proceeding
7 for backup purposes. Any
8 off-the-record discussions should be
9 had away from the computer. Please
10 remember to mute your microphone for
11 those conversations. Please have your
12 video enabled to help the reporter
13 identify who is speaking. If you are
14 unable to connect with video and are
15 connecting via phone, please identify
16 yourself each time before speaking.
17 We will provide a complimentary
18 unedited recording of this deposition
19 with the purchase of a transcript.
20 I apologize in advance for any
21 technical-related interruptions.
22 Thank you.

1 DR. DANIEL W. VAN DER WEIDE, after having first been
2 duly sworn by a Notary Public of the State of New
3 York, was examined and testified as follows:

4 COURT REPORTER: Please state your
5 name and address for the record.

6 THE WITNESS: Daniel van der Weide.

7 Address, 18 Pelham Court, P-E-L-H-A-M,
8 Madison, Wisconsin.

9 EXAMINATION BY

10 MR. AUTERI:

11 Q Good morning, Dr. van der Weide. You
12 understand this deposition is for the
13 interparty review proceeding for US Patent
14 No. 9,480,836?

15 A I do.

16 Q Is there any reason that you cannot
17 testify truthfully today?

18 A Not to my knowledge.

19 Q And where are you located today?

20 A At the address I just provided in
21 Madison, Wisconsin.

22 Q Is there anyone else with you there?

1 A No.

2 Q Other than via Zoom are you
3 communicating with anyone in the room or
4 remotely in any other way?

5 A No.

6 Q And you previously testified regarding
7 infringement and validity issues for the '836
8 Patent?

9 A I did.

10 Q And that was an international trade
11 commission case, right?

12 A That's correct.

13 MR. AUTERI: David, I'd like to mark
14 the first exhibit. It's a file with
15 the exhibit name EX1000 -- sorry. It
16 is EX1001-836 Patent.

17 TECH MIELCAREK: Please standby.

18 MR. AUTERI: And this is will be van
19 der Weide Deposition Exhibit 1.

20 (Whereupon, U.S. Patent No.
21 9,480,836 was marked as Exhibit
22 1 for identification as of this

1 date.)

2 (A discussion was held off the record.)

3 Q We've marked as van der Weide Deposition
4 Exhibit 1 US Patent No. 9,480,836. It also
5 happens to be Exhibit 1001 of the present IPR
6 proceeding. So let's go to the claims in
7 specific we want to look at.

8 Can you see Claim 1 and is it a good
9 size for you?

10 A I can.

11 Q The claim starts off a skin treatment
12 apparatus comprising a plurality of
13 electrodes. The electrodes being bipolar and
14 configured that can be insertable into the
15 skin to be treated.

16 My question is, when the claim refers to
17 a plurality of electrodes that would include
18 more than one electrode; is that correct?

19 A That would be my understanding.

20 Q And if you had, let's say two bipolar
21 electrodes, the electrodes would act as a
22 pair with one electrode being negative and

1 the other positive, is that a correct
2 description of bipolar electrodes?

3 A Yes. There were only two, it's my
4 opinion as a person of skill in the art would
5 understand that one electrode at any instant
6 in time would be say, trending positive in
7 voltage while the other one would be trending
8 negative and vice versa.

9 Q Okay. If you had a pair of bipolar
10 electrodes, each would be an opposite
11 polarity at any given time; is that a correct
12 way to understand it?

13 A Well, as one of skill understands there
14 are moments in time where the two electrodes
15 at an instant, may in fact, have exactly the
16 same polarity because as I said previously
17 one is trending positive and one is trending
18 negative. But they -- one of skill
19 understands that in general, at some moment
20 in the time, they may share an identical
21 polarity and that's all dependent on
22 particular conditions of the electrodes. So

1 I want to allow for that. But in general,
2 one of skill understands that the shorthand
3 is that one is positive and one is negative,
4 but that's of course can apply to DC voltages
5 as well as static voltages and that is not
6 insistent with the RF element of the claim
7 that's coming up.

8 MR. AUTERI: And, David, I'd like to
9 mark another Exhibit. It has a file
10 name EX1005-Ganz. I'd like to make
11 that van der Weide Deposition
12 Exhibit 2.

13 TECH MIELCAREK: Please standby. I'm
14 working on it.

15 (Whereupon, US Patent
16 Publication No. 2007/0208340
17 Ganz was marked as Exhibit 2 for
18 identification as of this date.)

19 MR. AUTERI: For housekeeping
20 purposes, what we've just marked as
21 van der Weide Deposition Exhibit 2, is
22 US Patent Publication No. 2007/0208340

1 to Ganz. And it also happens to be
2 Exhibit 1005 for the present IPR
3 proceeding.

4 Q Dr. van der Weide, I'm going to take us
5 down to Paragraph 55, read you a couple of
6 sentences and then I'll have a question about
7 what we talked about.

8 Dr. van der Weide, is this a good size
9 for you to see the beginning of Paragraph 55?

10 A I can see it now.

11 Q So the first sentence of Paragraph 55,
12 states "The electrodes can be either
13 monopolar or bipolar electrodes. Some
14 embodiments the electrodes are monopolar
15 electrodes, in the monopolar arrangement, one
16 electrode serves as a treating electrode and
17 another electrode is provided as a return.
18 The return electrode generally has a much
19 larger area than the treating electrode and
20 is placed out of the treated area."

21 If we skip down. (MARK)

22 My question is when you -- when Ganz

1 refers to treating electrode and a return
2 electrode, would a person of ordinary skill
3 in the art understand, sorry -- strike that
4 question and let's back up.

5 In Paragraph 55, Ganz disclosed
6 electrodes can be either monopolar or bipolar
7 electrodes, the third sentence it says in the
8 monopolar electrode arrangement, one
9 electrode serves as a treating electrode and
10 another electrode is provided as a return
11 electrode. My question Dr. van der Weide is a
12 treating electrode another way to refer to is
13 an active electrode?

14 A Well, that may be. However, it's not
15 entirely clear because current, one of skill
16 understands that current is flowing
17 through -- in order to complete a circuit
18 current flows through both the -- in Ganz'
19 terminology, current flows through the
20 treating electrode and the return electrode.
21 So the subsequent sentence, the return
22 electrode generally has a much larger area

1 than the treating electrode and is placed
2 outside the treated area, would imply to one
3 of skill that there is a lower current
4 density on the return electrode then there
5 would be on the treating electrode.

6 Q And then in the next paragraph,
7 Paragraph 56. Ganz explains "In other
8 embodiments, the electrodes are provided as
9 bipolar electrode arrangements, both the
10 positive and negative electrodes serve as
11 treating electrodes."

12 So in terms of bipolar electrodes, if
13 both Ganz' electrodes -- both the positive
14 and negative serve as treating electrodes, is
15 it correct to assume that both electrodes are
16 active electrodes?

17 A Well, again, the term "active" doesn't
18 appear in Ganz. So that would be importing
19 some terminology that Ganz has not explicitly
20 used or identified. And active is a broad
21 term to one of skill with -- active in
22 electrical terminology generally is used to

1 distinguish devices like transistors from
2 devices that do not have any power supply
3 such as a resistor, a passive device. So
4 active is used in contrast with passive.

5 There's, again, current is flowing
6 through both positive and negative electrodes
7 in the bipolar arrangement, so in that sense,
8 there is the same amount of current in order
9 to form a circuit is flowing through the
10 treatment electrode as well as the return
11 electrode. Otherwise, there would be
12 accumulation of charges, which is forbidden
13 on the fundamental principles. So I just
14 don't see the term active being used here in
15 Ganz. And so I would want to understand
16 precisely what the intent was to broaden Ganz
17 beyond the four corners of this disclosure.

18 Q If we look at the sentence in
19 Paragraph 56 that starts about on Line 5. It
20 says, "Embodiments where the electrodes are
21 provided as electrode pairs, bipolar
22 electrodes are desirable with one electrode

1 in the pair being a positive electrode and
2 other electrode being a negative electrode."

3 I believe we discussed this, but my
4 question is a positive and negative refer to
5 opposite polarities; is that correct?

6 A That would be how one of skill would
7 understand that terminology.

8 Q Is it correct to assume that Ganz when
9 considering two bipolar electrodes that make
10 a pair, each electrode would have an opposite
11 polarity at any given point in time?

12 A Well, I already answered that question
13 with a caveat.

14 Q When you say you already answered that
15 question, you're referring to what we were
16 talking about the '836 Patents claims for
17 bipolar electrodes; is that correct?

18 A In that line of questioning I already
19 mentioned that at certain instances of time
20 two electrodes, may in fact, have exactly the
21 same potential, and that's understood as one
22 may be trending upward while the other is

1 trending downward in the voltage.

2 Q And Ganz' bipolar electrodes would work
3 similarly to the '836's bipolar electrodes in
4 terms of how they trend in terms of
5 polarities?

6 A Well, that is -- Ganz discloses a
7 variety of different possible energy sources
8 and is not nearly as explicit or limited as
9 the teaching of the '836 Patent. So it's not
10 clear to me that one of skill would be using
11 the '836 Patent as a lens to view Ganz as to
12 view it's disclosure as Ganz does not have
13 that explicit teaching on limitation. It
14 teaches in some other paragraph, that I'm not
15 recalling at the moment, but it teaches a
16 variety of different energy sources. And is
17 not explicit even about how the electrodes
18 are activated or powered, if you will. In
19 terms of if they are -- if it is
20 electronically, how -- what kind of bias is
21 applied and whether there's some -- whether
22 it's explicitly or exclusively bipolar or

1 some hybrid of bipolar and monopolar is also
2 not entirely clear in Ganz for reasons that
3 I've seen in his disclosure.

4 Q I guess to back up, for bipolar
5 electrodes that have pairs, would you agree
6 that simplistic view is that each pair of
7 electrodes would need opposite polarity
8 electrodes enabled to complete a circuit; is
9 that a correct understanding?

10 A Well, that's effectively true for any
11 pair of electrodes. If there is no potential
12 difference between electrodes there would be
13 no current flow.

14 So opposite implies that there's some
15 ground potential, some zero potential,
16 typically referred to as ground, opposite
17 would imply that in general one electrode
18 would be a certain potential, more positive
19 than ground where as the other electrode
20 would be a certain potential more negative
21 than ground.

22 So the question opened up with a

1 qualifier of simplistic, but in my experience
2 there are many ways of biasing and driving
3 arrays of electrodes or just two. Ganz
4 contemplates monopolar and bipolar without
5 getting necessarily getting more explicit
6 than that. So I'm just not sure how one of
7 skill is interpreting Ganz because it's quite
8 broad in its disclosure and not very
9 explicit at all when it discusses bipolar
10 electrodes as opposed to monopolar where it
11 actually has an explicit embodiment and
12 experimental result in Paragraph 65, for
13 example.

14 Q In Paragraph 56 though we were looking
15 in Line 5 it says, "Embodiments where the
16 electrodes are provided as electrode pairs,
17 bipolar electrodes are desirable with one
18 electrode in the pair being a positive
19 electrode and other electrode being a
20 negative electrode." (MARK)

21 I'm just asking do you agree that Ganz
22 discloses that bipolar electrodes pairs have

1 one positive electrode and the other one
2 negative electrode; is that correct?

3 A That's effectively what the words say in
4 Paragraph 56.

5 Q So that would mean at any given point in
6 time a given electrode pair would have two
7 electrodes that are having opposite
8 polarities at a given time; is that correct?

9 A Well, that's taking another step beyond
10 just one being a positive and the other one
11 being a negative. It doesn't actually
12 explicitly say that they have opposite
13 polarities.

14 Q But you would agree positive and
15 negative are opposite polarities, correct?

16 A In general, I think one skilled could
17 understand that as being one.

18 Q Sorry. As Ganz discloses in a pair of
19 bipolar electrodes they have one positive
20 electrode the other electrode being negative,
21 that means that Ganz discloses that any given
22 pair there's two electrodes each having an

1 opposite polarity; is that correct?

2 A That could be one interpretation.

3 Q Do you agree that Ganz does not disclose
4 that a given electrode has both polarities at
5 the same time such that it completes its own
6 circuit?

7 A It's not physically possible for an
8 electrode, i.e. a conductor, to have multiple
9 voltages at a single point on that
10 inductor -- on that conductor. So this opens
11 up the possibility of transmission line
12 effects or other effects that need to be
13 considered, without further qualification the
14 question is too broad to answer definitively.

15 MR. AUTERI: Let's mark another
16 exhibit. David, this going to be a
17 document with a file titled Public
18 EX.2143. We're going to make this van
19 der Weide Deposition Exhibit 3.

20 (Whereupon, Declaration of
21 Daniel W. van der Weide in
22 Support of Patent Owner's

1 Response was marked as Exhibit 3
2 for identification as of this
3 date.)

4 MR. AUTERI: For housekeeping
5 purposes, this is the public version
6 redacted of the Declaration of
7 Danielle W. van der Weide in Support
8 of Patent Owner's Response. It also
9 happens to be Exhibit 2143 of
10 IPR 2024-00386.

11 TECH MIELCAREK: Please standby.

12 Q I'm going to take control of the
13 declaration, go to Page 21 of your
14 declaration, in Paragraph 38.

15 In Paragraph 38, you state, "Bipolar
16 systems however induce an electrical circuit
17 between the two electrodes." And at the
18 bottom of this page you have a footnote that
19 says, "Manstein refers to use of an active
20 electrode and a grounding electrode as
21 bipolar. While the '836 Patent involves use
22 of active electrodes where sets of electrodes

1 have opposite polarities at any point in
2 time."

3 My question to you is: Can you explain
4 the difference between Manstein's bipolar
5 electrodes and the '836 Patent electrodes in
6 terms of the use of only active electrodes in
7 the '836 Patent?

8 A Well, this refers to how the electrodes
9 are being driven and my understanding of the
10 '836 Patent is also informed by my
11 observations of the Serendia apparatus, which
12 is consistent with how the '836 Patent
13 describes bipolar electrodes. That -- in
14 that case, having made measurements using a
15 source code I saw and reported on the
16 opposite trending radio frequency exertation
17 of the electrodes used in the Serendia
18 apparatus, which I understood was an
19 expression of our embodiment of the '836
20 Patent.

21 So that's different and more, let's say
22 common understanding of bipolar, two

1 electrodes are being driven with opposite
2 phase wave forms, typically but not
3 exclusively sinusoidal. Whereas I in
4 Paragraph 2 of my declaration on Page 21, I
5 say Manstein refers to use of an active
6 electrode and grounding electrode as bipolar.
7 So in that sense it's using the term
8 differently because a grounding electrode
9 ordinarily isn't provided with an active
10 current source, it is a return electrode
11 current. It's flowing through it without the
12 intentional application of a voltage.

13 Q And just to confirm, you still agree the
14 '836 Patent involves the use of sets of
15 electrodes that have opposite polarities at
16 any point in time?

17 A Yes. I didn't elaborate on the caveat
18 that I provided earlier in this proceeding,
19 about where there's a crossover point in
20 time, and the two electrodes have, at that
21 instant, the same voltage. So polarity
22 implies a direction trending, if you will, in

1 this context. And so I think that statement
2 is consistent with how one in the skill would
3 understand polarity.

4 Q Okay. Based on that understanding, when
5 Ganz discloses that it uses pairs of
6 electrodes, where for every pair you have one
7 positive and one negative electrode, would
8 you agree that Ganz discloses sets of
9 electrodes that have opposite polarity at any
10 point in time?

11 A Well, I'm not sure that I -- that I
12 would limit Ganz in that respect, as I
13 previously indicated. And that's because at
14 least a couple of reasons; first of all, as
15 is plainly written here in Footnote 2,
16 different inventors, different sources use
17 that term "bipolar" to mean different things.
18 As I pointed out, Manstein refers to an
19 active and a grounding electrode as bipolar;
20 that's not necessarily how one of skill would
21 have understood the plain and ordinary
22 meaning of that term.

1 Q Is this --

2 A Nonetheless that's how Manstein, a prior
3 art references, uses it. And so likewise --
4 and I'm just providing my reasoning for my
5 answer.

6 Likewise, Ganz is even less explicit
7 about how it is driving its -- how it
8 proposes to drive its bipolar electrodes. It
9 provides the term, it doesn't provide any
10 further teaching about that -- the use of
11 that term in the context of its invention.
12 Rather, Ganz only provides explicit teaching
13 in the context of monopolar, a monopolar
14 embodiment, including the experiments
15 detailed in its Paragraph 65.

16 So in one skill, in my opinion, reading
17 the term "bipolar" in the '836 Patent, as I
18 said previously, and I'll say it again:
19 Would not, in my opinion, use it as a lens
20 through which to view prior art teachings of
21 electrode pairs termed bipolar by other
22 inventors who clearly have, either a more

1 vague understanding or a distinct
2 understanding from what my opinion would have
3 been the plain and ordinary construction of
4 that term.

5 Now I'm done.

6 Q So I guess to confirm, is your
7 Footnote 2 about the difference between
8 Manstein '836 Patent just a semantic
9 difference in the way they categorize what is
10 active electrodes? Or is this an actual
11 substantial difference that you viewed
12 between Manstein and the '836 Patent of
13 bipolar electrodes?

14 A I think in the context of my Footnote 2
15 in my declaration, I'm commenting that one of
16 skill, when simply provided the terminology
17 for Manstein of an active electrode and a
18 grounding electrode, would probably not have
19 referred to that set of electrodes as being
20 bipolar. Because bipolar typically evokes a
21 balanced application of voltages and
22 corresponding currents that flow.

1 And when I say "balanced," one of skill
2 would understand that's plus/minus
3 differential as opposed to single ended. And
4 so that's why I highlighted this departure
5 from what I would understand one of skill as
6 appreciating how bipolar -- what bipolar
7 actually means.

8 And it also points out that there, in
9 fact, could be some hybrid of the two, where
10 there's perhaps slightly more current density
11 on what is termed the active electrode; and
12 slightly less current density and what is
13 termed a grounding, or return electrode.

14 So there's overall -- well, there's a
15 whole host of possibilities in the prior art
16 for what is meant to the inventor when that
17 inventor uses the term "bipolar".

18 Q But as we looked at Ganz, discloses that
19 it uses sets of bipolar -- pairs of bipolar
20 electrodes where in any given set one is
21 positive and one is negative; is that
22 correct?

1 A I think that's essentially how Ganz is
2 using that term. If that's just essentially
3 repeating -- in Ganz 55 or 56, it just says
4 that -- first sentence, the last part of the
5 first sentence of Paragraph 56 of Ganz says,
6 "Both the positive and negative electrodes
7 serve as treating electrodes."

8 So that's about the extent of how it
9 characterizes it, other than further down it
10 says, "Bipolar electrodes are desirable with
11 one electrode in the pair being a positive
12 electrode and the other electrode being a
13 negative electrode."

14 It doesn't explicitly teach that those
15 electrodes are of equal magnitude and
16 opposite sign. It just says that one is
17 positive and one is negative.

18 Q Do the claims require the bipolar
19 electrodes have equal magnitude in opposite
20 sign?

21 A The claims?

22 Q Of the '836 Patent.

1 A I don't recall that as being a claim
2 limitation.

3 Q So then this distinction would not be
4 relevant to Ganz in comparison to the '836
5 Patents claims; is that correct?

6 A Well, within the confines of the context
7 that I've been responding to this morning,
8 I'd agree. But I've also pointed out that
9 the '836 Patent is teaching a specific type
10 of bipolar application. And I've also made
11 quite clear that the term "bipolar" does not
12 have, apparently, have a universal,
13 well-understood meaning in this art, as at
14 least evidenced by my Footnote 2 in my
15 declaration.

16 Q Just going back to my question. If Ganz
17 discloses in its bipolar embodiment for each
18 pair one electrode is positive and the other
19 is negative, if one electrode is positive at
20 a given moment, the other one's negative, do
21 you agree that Ganz discloses electrodes that
22 have opposite polarity at any point in time?

1 MR. SANDERS: Objection. Incomplete
2 hypothetical.

3 A Well, I think that could be one example
4 within a universe of possibilities.

5 Q There's nothing in the claim language
6 that would distinguish the '836 Patent's
7 bipolar electrodes from Ganz' bipolar
8 electrodes?

9 A Well, I understand that one in the skill
10 reads the claims in light of the
11 specification. So there are teachings within
12 the specification of the '836 Patent that
13 convey to one of ordinary skill in the art
14 the particular limitations of how it
15 considers its bipolar electrodes to operate
16 in skin.

17 And it, to my recollection, the '836
18 Patent does not teach bipolar in the context
19 of, for example, Manstein, with an active
20 electrode and a grounding electrode.

21 So, again, one of skill reads the claim
22 language of '836 in light of the

1 specification.

2 Q So are you importing limitations from
3 the specification into the claims?

4 A No.

5 Q Can you -- so in your opinion, you
6 believe the bipolar electrodes claimed in the
7 '836 Patent are actually different from the
8 bipolar electrodes that Manstein discloses;
9 is that correct?

10 A Well, at least to the extent that I
11 already described it and summarized it in my
12 Footnote 2 on Page 21 of my declaration. I
13 don't see disclosure in the '836 Patent
14 specification of a -- of the asymmetry that
15 Manstein refers to, when it has an active
16 electrode and a grounding electrode; I've
17 already explained my reasoning there.

18 Q Ganz doesn't disclose using grounding
19 electrodes for its bipolar embodiments; is
20 that correct?

21 A I'm not sure I can agree with that.

22 Q In your declaration, did you opine that

1 you believe that Ganz' bipolar electrodes are
2 not bipolar electrodes that would meet the
3 claims of bipolar limitation?

4 A I don't recall that I made that -- that
5 I offered that explicit opinion. But, again,
6 until this morning, I wasn't asked about it
7 to this level of detail.

8 Q Just to confirm, is it your opinion that
9 the bipolar electrodes claimed in the '836
10 Patent should be interpreted as requiring the
11 use of only active electrodes?

12 A Well, again, this question attempts to,
13 I believe, import terminology that I've
14 already addressed in the previous answer.

15 So I don't wish to contradict my
16 previous testimony by implying that I'm
17 importing the term -- can I have the question
18 again, please.

19 Q Sure.

20 Just to confirm, is it your opinion that
21 the bipolar electrodes claimed in the '836
22 Patent should be interpreted as requiring the

1 use of only active electrodes?

2 A I don't know if I've opined that only
3 active electrodes are required by the claims.
4 I have however, set forth an opinion in
5 Footnote 2 on the page, that the '836 Patent
6 involves the use of active electrodes. I
7 explain what that means. Again, in a
8 slightly shorthanded way, because I didn't
9 elaborate on the instant crossover point,
10 which one skilled would understand.

11 But, in general, as I previously
12 explained, the '836 Patent and the
13 embodiments that are taught in it are
14 consistent with the observations I've made of
15 the Serendia apparatus, which was driving
16 pairs of electrodes with opposite polarities.

17 And so that, Footnote 2 on the screen,
18 is representative of my understanding of how
19 one of skill would understand the claimed
20 invention.

21 Q So by "Serendia apparatus," are you
22 referring to Sylfirm X?

1 A Yes.

2 Q Okay. So you're importing limitations
3 from the commercial embodiment of the '836
4 Patent into the claims; is that correct?

5 A No. I'm merely reporting the
6 consistency among the disclosure of the '836,
7 its claim language, and an actual physical
8 embodiment that I've measured.

9 Q So is it correct to say your
10 interpretation is based on the single
11 embodiment of the '836 Patent?

12 A No.

13 Q And so going back, I'm not sure if you
14 answered me on this one, but Ganz discloses,
15 in its electrode -- in its bipolar
16 embodiments, it uses pairs of the electrodes
17 where each pair has positive and negative
18 electrodes.

19 You agree with that, correct?

20 A Well, more specifically reading from
21 Ganz Paragraph 56, it says, "In some
22 cases" -- this is the second sentence of

1 Paragraph 56 of Ganz:

2 "In come cases the bipolar
3 electrodes are biopolar" -- is what it
4 literally says. I don't believe that's
5 what it means -- "axial interlaced
6 finger electrodes in embodiments
7 wherein the electrodes are provided as
8 electrode pairs. Bipolar electrodes
9 are desirable with one electrode in the
10 pair being a positive electrode and the
11 other electrode being a negative
12 electrode."

13 That's the extent of its teaching about
14 what it evidently means as bipolar.

15 Q But my question is a little simpler. If
16 Ganz discloses with bipolar electrodes one
17 electrode in the pair being a positive
18 electrode, the other electrode being a
19 negative electrode.

20 Ganz discloses each pair of electrodes
21 has opposite polarity electrodes, correct?

22 A Well, no. That could be one example,

1 but there are other examples that one in the
2 skill would understand. And one view of a
3 potential for a bias voltage across a set of
4 electrodes and a grounding electrode, for
5 example. But could it mean that all
6 electrodes were positive -- at a positive
7 voltage with respect to ground.? But,
8 between any electrode pairs there may be one
9 that is more positive than the other, such
10 that the difference would be nonzero.

11 Q Looking at a given electrode pair, Ganz
12 discloses one electrode is positive and the
13 other is negative.

14 Do you agree that in that situation, in
15 a given pair, each electrode is an opposite
16 polarity?

17 A No. I said that is a possibility, but I
18 just provided an example where it wouldn't be
19 true.

20 Q You agree positive and negative are
21 opposite polarities, correct?

22 A In a general sense, I agree.

1 Q And if one electrode in a pair of
2 electrodes is positive, and the other
3 electrode of the pair of electrodes is
4 negative, that means the electrodes in that
5 pair have opposite polarities, correct?

6 A I disagree.

7 Q Can you -- scratch that.

8 MR. AUTERI: Do you mind if we take a
9 10-minute break?

10 THE WITNESS: Fine with me.

11 MR. AUTERI: Okay. Let's go off the
12 record.

13 (Whereupon, a recess was taken
14 from 10:15 AM until 10:26 AM.)

15 Q Dr. van der Weide, I'd like to just
16 confirm the last question.

17 So toe back up, you agree that in a
18 general sense, positive and negative are
19 opposite polarities?

20 A Well, I certainly agree, and I think
21 with my testimony previously that that is a
22 common, but not exclusive understanding.

1 Q And then my next question is: A
2 positive electrode would have an opposite
3 polarity than a negative electrode; is that
4 correct?

5 A I think I gave a very similar answer,
6 and I also provided an alternative
7 understanding to that in a previous answer.

8 Q Right. But it wasn't quite clear. So I
9 want to confirm.

10 Do you agree that if you have a positive
11 electrode you would have -- the other
12 electrode would have opposite polarity than a
13 negative electrode?

14 A Well, "opposite" with respect to some
15 reference.

16 Q So you agree, generally, that positive
17 and negative are opposite polarities,
18 correct?

19 A When defined against a given reference,
20 I would agree.

21 Q Okay. So under the understanding, you
22 have one electrode in a pair being positive

1 and the other electrode in the pair is
2 negative, then in that pair, you have two
3 opposite polarity electrodes, correct?

4 A Well, in a well-understood and confined
5 situation, I would agree; but that doesn't
6 necessarily generally apply.

7 Q But you agree positive and negative are
8 opposite polarities; is that correct?

9 A Same answer.

10 Q I'm trying to understand whether this
11 goes back to your distinction about whether
12 opposite polarities requires equal and
13 opposite magnitudes for the signal.

14 Does that have anything to do with your
15 answers here?

16 A It does.

17 Q Okay. And if in the situation where we
18 don't require opposite electrodes -- strike
19 that question.

20 In the situation -- just going back, I
21 want to confirm -- I'm not sure this is
22 clear, do you believe the '836 Patent's

1 bipolar claims require opposite polarity
2 electrodes to have equal magnitude?

3 A No. I don't see anything -- I don't see
4 a limitation of -- on their magnitudes in the
5 claim language of the '836 Patent.

6 Q Right. So the distinction between equal
7 magnitudes and not, it's not relevant to the
8 claims here; is that correct?

9 A I don't see a magnitude limitation in
10 the '836 Patent claims about the electrodes
11 being required to have equal magnitudes.

12 Q It doesn't matter whether Ganz discloses
13 its opposite polarity pairs of electrode have
14 equal magnitudes or not; is that correct?

15 A In as much Ganz -- as I previously
16 testified, is actually quite vague about what
17 it contemplates as its electrode arrangement.

18 I mean, in fact, Ganz -- as I read Ganz
19 more carefully, it appears to contemplate a
20 potential mix of monopolar and bipolar. So
21 it's not at all clear, not just on that
22 basis, but also on the basis of it's lack of

1 description for particular radio frequency or
2 how things are wired up or even what the
3 energy source is. It's -- Ganz just doesn't
4 offer any particular limitations on what it
5 considers to be bipolar.

6 Q You do agree that Ganz gives particular
7 information in Paragraph 56, that when
8 bipolar electrodes are desirable, one
9 electrode in the pair is positive and the
10 other electrode in the pair is negative. You
11 agree Ganz discloses that level of detail,
12 correct?

13 A I agree.

14 Q Right. And you agree that positive and
15 negative are opposites pairs, correct?

16 A Again, you've asked this question
17 multiple times and I don't wish to contradict
18 my previous testimony.

19 Positive and negative are understood by
20 one of ordinary skill in the art in view of a
21 reference. And that reference could be zero
22 volts ground, universal earth ground, if you

1 will. But in many cases there could be a
2 bias, a nonzero volt ground or a non zero
3 volt return electrode, if you will.

4 In which case, electrodes could be both
5 positive with respect to a universal ground,
6 positive with respect to a nonuniversal
7 ground. Or positive negative with respect to
8 either of those.

9 So bipolar -- Ganz is not explicit about
10 what it means by positive and negative. It
11 doesn't say with respect to a given ground
12 reference.

13 Q But the claims of the '836 Patent,
14 there's nothing in the claims that requires
15 the opposite polarities that reference to
16 a -- sorry, to back up.

17 Everything you're talking about here has
18 nothing to do with any claim limitations; is
19 that correct?

20 A Well, I'm not sure I can entirely agree
21 with that. Unless that question can be made
22 more explicit. That's a very broad question.

1 Q I'm trying to understand what you
2 believe is required by the claims by bipolar
3 limitation.

4 Do you agree that in Paragraph 56, when
5 Ganz discloses bipolar electrodes are
6 desirable with one electrode in the pair
7 being a positive electrode and the other
8 electrode being a negative electrode, that
9 would meet the bipolar limitation in the '836
10 Patent?

11 A I can imagine a universe in which that
12 language could meet the claim language in the
13 '836 Patent.

14 Q So you would agree that the '836 Patent
15 has a fairly broad scope -- strike that
16 question.

17 Let's go back to your declaration.

18 MR. AUTERI: David, can we put back on
19 screen what was I believe van der
20 Weide Deposition Exhibit 3.

21 Q I think that's to Page 23. And look at
22 Paragraph 40 of your declaration.

1 In Paragraph 40, you state:

2 "As another example of bipolar
3 systems generating thermal damage
4 between electrodes, Figure 4A of
5 WO2007/064718 (Hantash") (one of the
6 petitioner's references) shows
7 treatment zones 160 that are created
8 between nearest neighbor needles 115
9 that are connected to opposite poles of
10 the RF source 110. Figure 4B shows the
11 corresponding treatment pattern 161 and
12 Figure 4A after the needles have been
13 removed from the skin 150."

14 If we scroll down, the exhibit cite is
15 to Exhibit 1007; is that correct?

16 A Yeah. That's what it says.

17 Q And then, David, I'd like to mark the
18 next exhibit, this will be van der Weide
19 Deposition Exhibit 4. And the document I
20 want marked has a title EX-1007-HANTASH.

21 (Whereupon, International
22 Publication No. WO 2007/064718

1 was marked as Exhibit 4 for
2 identification as of this date.)

3 MR. AUTERI: For housekeeping
4 purposes, the document we are marking
5 as van der Weide Deposition Exhibit 4
6 is WO 2007/064718, which is an
7 international patent publication to
8 Hantash. And it is also Exhibit 1007
9 to the present IPR proceeding.

10 TECH MIELCAREK: Please standby. I'm
11 bringing it on screen right now.

12 Q I'm going to take us to Page 6. Look at
13 Paragraph 34. Paragraph 34 starts on Page 6,
14 it spills over to Page 7. Look at
15 Paragraph 34. Ganz describes, explains:

16 "Figure 1 illustrates an
17 embodiment of the invention, in this
18 embodiment a radio frequency RF source
19 110 is connected to an array of needles
20 115, that are mounted on a contact
21 plate. The RF source 110 generates the
22 energy that is delivered to the tissue

1 to create treatment zones 160 within
2 the skin 150."

3 My question to you is, Hantash refers to
4 "Treatment zones 160 within the skin 150."

5 Do you see that?

6 A 160 within the skin, 150. Yes, I see
7 that.

8 Q Let's go to Page 11. If we look at
9 Paragraph 51, Hantash says:

10 "Figures 4A and 4B show a
11 treatment pattern 161 of treatment
12 zones 160 that can be produced from
13 either of the wiring patterns shown in
14 Figure 3A or 3B."

15 So do you see in this paragraph
16 Hantash refers to Figures 4A and 4B as
17 treatment pattern 161 of treatment zone
18 160?

19 A I see that.

20 Q If we go to Page 5, Paragraph 24,
21 Hantash explains Figures 4A and 4 -- scratch
22 that.

1 In Paragraph 24, Hantash explains,
2 Figures 4A and 5 -- sorry. Strike that.

3 In Paragraph 24, Hantash discloses:

4 "Figures 4 and 5 are treatment patterns
5 that can be created using either of the
6 wiring patterns shown in Figures 3A and 3B.
7 Figures 4A and 5A show treatment patterns and
8 the electrodes. Figures 4B and 5B show the
9 corresponding treatment patterns after the
10 electrodes have been removed from the skin."

11 Do you see that section of Paragraph 24?

12 A I do.

13 Q The next paragraph talks about Figures 6
14 and 7, and also discloses that Figures 6A,
15 6B, 7A and 7B all show corresponding
16 treatment patterns; is that correct?

17 A Yeah. That's what it says.

18 Q If we go to page -- if we go to
19 Figure 4A.

20 Dr. van der Weide, is that big enough
21 for you to see the reference in those?

22 A Yeah. Sure.

1 Q So in Figure 4A, there are reference
2 numerals 160A through 160D.

3 Do you see that?

4 A Yes.

5 Q And earlier we saw Hantash refers to
6 treatment zones by the reference numeral 160;
7 is that correct?

8 A I agree.

9 Q Is it correct to assume reference
10 numerals 160A through 160D are showing
11 treatment zones?

12 A Appears to be Hantash's teaching.

13 Q So Figure 4A shows treatment zones
14 between electrodes; is that correct?

15 A That appears to be.

16 Q And if you scroll down to Figure 4B. 4B
17 also has treatment zones 160A through 160D;
18 is that correct?

19 A Yes.

20 Q If we go to Figure 7A and start there.
21 Figure 7A also shows treatment zones 160A
22 through 160D, correct?

1 A Yes.

2 Q And, similarly, Figure 7B shows
3 treatment zones 160A through 160D?

4 A Agreed.

5 Q Go to Page 13 and look at Paragraph 60.

6 In Paragraph 60, Hantash discloses:

7 "The treatment pattern 164 shown
8 in Figures 7A and 7B is particularly
9 useful because it can create a line of
10 tension within the skin 150 due to
11 collagen denaturation."

12 Do you agree that Hantash discloses that
13 the treatment zones between the electrodes
14 are areas of skin that have experienced
15 collagen denaturation?

16 A Well, to the extent that that's what it
17 appears to be claiming to -- representing to
18 one of skill in the art. I don't see any
19 actual results of tissue treatment. This
20 Figure 7A is a cartoon representation, if you
21 will. It's a drawing, it's not actual tissue
22 results. So it makes a statement.

1 MR. AUTERI: I'd like to mark another
2 exhibit, I think the next one is van
3 der Weide Deposition Exhibit 5. I'd
4 like to make the document that has a
5 title named Patent Owner Response the
6 next available exhibit.

7 And for housekeeping purposes, what is
8 being marked as van der Weide
9 Deposition Exhibit 5 is the public
10 version that is redacted of the Patent
11 Owner's Response in IPR 2024-00386.

12 (Whereupon, Patent Owner's
13 Response, Case No. IPR
14 2024-00386 was marked as Exhibit
15 5 for identification as of this
16 date.)

17 MR. AUTERI: Please also put in the
18 chat in case Dr. van der Weide needs
19 to take control and look at
20 surrounding paragraphs or any other.

21 TECH MIELCAREK: The marked exhibit is
22 now in the chat and I'll put it on

1 screen in just a second.

2 Q Go to Page 7. Section entitled, "The
3 effects of RF energy on tissue."

4 Do you see that, Dr. van der Weide?

5 A I do.

6 Q The first sentence in that section says:

7 "As the RF energy heats the skin
8 different effects occur to the tissue"; is
9 that correct?

10 A In general, that's a very broad
11 statement, but I don't see any reason to
12 disagree with it.

13 Q The next page, the Patent Owner's
14 Response includes a cartoon that has a
15 representation of a needle inserted into a
16 section of skin; is that correct?

17 A That's an illustration, yes, I agree.

18 Q And the illustration shows a variety of
19 different tissue effects around the
20 electrode; is that correct?

21 A It is what it is apparently intended to
22 show.

1 Q And one of the tissue effects around the
2 electrode shown as coagulation; is that
3 correct?

4 A I see a zone labeled coagulation.

5 Q And, then, another of the effects shown
6 here is protein denaturation; is that
7 correct?

8 A I see that as well.

9 Q And this shows that coagulation occurs
10 at around 58 to 85 degrees Celsius; is that
11 correct?

12 A That's evidently what it's showing.
13 It's an approximately equal sign, evidently.

14 Q So do you agree that coagulation occurs
15 in the skin at temperatures that are
16 approximately 58 to 85 degrees Celsius?

17 A Well, I don't have a specific reason to
18 dispute that. I've certainly -- even though
19 I'm not a dermatologist or a physician, I
20 have performed experiments on skin like
21 tissue. And, in fact, had a laboratory that
22 creates collagen tissue mimics, and had

1 active projects in this area.

2 My experience is that there's due to
3 heterogeneity of tissue, it's not like
4 boiling water, where there's a precise
5 temperature which there's a phase transition.
6 So these are necessarily approximate, but I
7 don't have any reason to disagree with the
8 general guidance provided here.

9 Q So in this figure, do you agree this
10 figure shows that protein denaturization --
11 denaturation, sorry, occurs at temperatures
12 that are lower than the temperatures required
13 for coagulation; is that correct?

14 A That's what it says here. I think it's
15 important, as one in the skill would
16 understand, that just like frying an egg,
17 it's a common everyday experience of
18 irreversible denaturation of proteins that
19 then can further result in coagulation, like
20 when scrambling an egg.

21 So denaturation is commonly understood
22 as a breakdown of the protein structure, and

1 is depicted here as being something that is
2 irreversible, even though, to get more
3 technical, it's possible to denature a
4 protein and then fold it again. I have done
5 research and published research in that
6 regard, too.

7 So this cartoon needs to be understood
8 with the limits that it inherently presents,
9 it's not a scientific treating, it's just
10 indicating certain ranges over which certain
11 effects in proteins could be observed.

12 Q Would it be correct to say the
13 temperatures required to start collagen
14 coagulation are higher than the temperatures
15 needed to start collagen denaturation?

16 A Well, that's what is indicated by this
17 figure.

18 Q Let's go back to Hantash, which was what
19 we had marked van der Weide Deposition
20 Exhibit 4.

21 Let's go to Page 17, Paragraph -- starts
22 on Page 17 and spills over into Paragraph 79.

1 Let's go to the section of Paragraph 79
2 that's on Page 18.

3 If we go about eight lines down, Hantash
4 explains:

5 "Larger or smaller treatment zones are
6 within the scope of the invention and the
7 size and the location of the treatment zones
8 will be application specific."

9 Actually, strike that question.

10 Let's actually look at the second to
11 last sentence of Paragraph 79.

12 That sentence says:

13 "The pulse conditions outlined
14 here produce substantial lateral
15 tightening of skin tissue and treat
16 substantial portions of the dermal
17 tissue. These parameters can be used
18 to coagulate collagen within the skin
19 and to kill or injure cells to
20 stimulate the wound healing response in
21 surrounding healthy tissue."

22 My question is, do you agree that

1 Hantash discloses that coagulation can
2 also be generated using its parameters?

3 A Well, that's a very broad statement made
4 by Hantash. It doesn't provide an explicit
5 measurement of temperature that are produced
6 in the skin under given energy, frequency,
7 needle depth, many other parameters. So it
8 says what it says, but it's not very
9 detailed, so I can only read the words on the
10 page.

11 Q So then you don't disagree that Hantash
12 also discloses its parameters used to kill or
13 injure cells to stimulate the wound healing
14 response in surrounding healthy tissue; is
15 that correct?

16 A Yes. That's permissive language.
17 Certainly there's a wide range of effects on
18 individual cells depending on their proximity
19 to an energy source and the amount of energy
20 to which their exposed.

21 So it speaks to individual cells and I
22 don't disagree that individual cells may

1 experience a particular effect.

2 Q Let's go back to your declaration, which
3 was van der Weide Deposition Exhibit 3 and go
4 to Page 81 and look at Paragraph 141. Right
5 before the Paragraph 141, your declaration
6 has a subsection titled "objective indicia
7 support non-obviousness"; is that correct?

8 A Yes.

9 Q And in Paragraph 141 of your declaration
10 you referred to Dr. Goldberg's opinion that
11 certain objective indicia of non-obviousness
12 further demonstrates that the '836 Patent
13 claims are nonobvious; is that correct?

14 A Yes. That's what I said.

15 Q You refer to the commercialization of
16 the '836 Patent's technology, correct?

17 A Yes.

18 Q And that refers to the Sylfirm X
19 product, correct?

20 A Yes.

21 Q And you've opined that Sylfirm X
22 practices the claimed invention of the '836

1 Patent, correct?

2 A I have.

3 Q And you specifically went through each
4 of the limitations of Claim 1 of the '836
5 Patent, correct?

6 A Yes.

7 Q So let's look at Page 87, the subtitle
8 at the top of Page 87, is 1[b] a radio
9 frequency (RF) generation module, the RF
10 generation module electronically coupled to
11 the polarity of electrodes and configured to
12 provide an alternating current (AC) RF signal
13 to the polarity of electrodes configured to
14 cause coagulation around each electrode
15 rather than coagulating between the
16 electrodes.

17 Right under that in Paragraph 153 you
18 stated that it's your opinion that the
19 Sylfirm X practices this limitation; is that
20 correct?

21 A Yes.

22 Q And I guess just to confirm that title

1 is referring to a limitation of Claim 1 of
2 the '836 Patent, correct?

3 A It's referring to the limitation just
4 prior to it, yes.

5 Q Can we just go down to Paragraph 159,
6 that paragraph says, with respect to the
7 "electrodes configured to cause coagulation
8 around each electrodes rather than
9 coagulating between the electrodes" portion
10 of this limitation, I understand that in the
11 ITC investigation the parties agreed the term
12 carries its plain and ordinary meaning, which
13 is two or more electrodes adapted to cause
14 coagulation around each electrode without
15 such coagulation fully extending from one
16 electrode to another electrode.

17 My question is: this is the ITC
18 investigation that you were an expert for,
19 that involved the '836 Patent, correct?

20 A That's correct.

21 Q Let's go to the next Paragraph 160. In
22 that you state:

1 "Patent owner's documents confirm
2 that in the Sylfirm X the RF generation
3 module along with the plurality of
4 electrodes are configured to cause
5 coagulation around each electrode
6 rather than coagulating between the
7 electrodes." (MARK)

8 And you cite to a couple of
9 documents one of which includes Exhibit
10 2099; is that correct?

11 A Yes.

12 Q And in the next paragraph, Paragraph 161
13 you state:

14 "For example, the Sylfirm X is
15 marked as being configured to cause
16 coagulations around each electrode
17 rather than coagulating between them."

18 And you provide what looks like a
19 screenshot from Exhibit 2099; is that
20 correct?

21 A That's right.

22 Q And in the screenshot that's provided in

1 Paragraph 161 there is a time stamp of about
2 two minutes and one second?

3 A Is that the question, I'm not sure.

4 Q So the time stamp for the screenshot is
5 two minutes one second; is that correct?

6 A No. That's what it says on the
7 screenshot.

8 Q And in the screenshot there is a cartoon
9 that depicts two needles inserted into skin;
10 is that correct?

11 A Yes.

12 Q And the two needles are represented by
13 two white triangles; is that correct?

14 A Yes.

15 Q Where the coagulation is supposed to be
16 is marked in red; is that correct?

17 A Yes.

18 Q And there is a -- do you see where it
19 says CW mode?

20 A Um-hmm, yes I, do.

21 Q Do you understand CW mode to be
22 referring to the Sylfirm X's continuous wave

1 mode?

2 A I do.

3 Q And do you believe this is an accurate
4 representation of where the coagulation would
5 form when using the Sylfirm X's CW mode?

6 A Well, as I provided in my
7 investigations, in the context of the ITC, I
8 performed independent measurements, heat
9 mapping on simulated tissue using a
10 continuous wave drive of needle arrays, not
11 only of respondent's products, but also of
12 the Sylfirm X product and observed results
13 consistent with this cartoon presentation.

14 Q What you were just referring to was your
15 heat mapping test; is that correct?

16 A That's right.

17 Q Great. So you would say your heat
18 mapping test confirmed your understanding of
19 which products practice the claimed
20 coagulation limitation?

21 A Well, I believe I said they were
22 consistent with, but it's not significant

1 distinction.

2 MR. AUTERI: I'd like to mark another
3 exhibit, David, let's make the file
4 EX.2099-Sylfirm X video two the next
5 deposition exhibit. I believe that
6 would be van der Weide Deposition
7 Exhibit 6.

8 (Whereupon, Sylfirm X Video was
9 marked as Exhibit 6 for
10 identification as of this date.)

11 MR. AUTERI: For housekeeping
12 purposes, that is what is marked as
13 van der Weide Exhibit 6 is
14 Exhibit 2099 to IPR 2024-0386.

15 TECH MIELCAREK: It's on screen, the
16 video starts with an empty white
17 frame. Counsel, let me know when you
18 wants me to start playing it.

19 MR. AUTERI: Let's play it up to the
20 43 second mark and pause it there.

21 TECH MIELCAREK: Starting playback
22 now.

1 (Plays video.)

2 Q My question is going to focus on the
3 next section, but I wanted to play the video
4 coming up to this point. So let's start and
5 play from the 43 mark to the 58 second mark
6 then I'll ask my question.

7 (Plays video.)

8 So my question to you is: Sylfirm X has
9 two different modes; is that correct?

10 A That's my understanding.

11 Q And in addition to the CW mode which we
12 referenced earlier, there's also a PW mode;
13 is that correct?

14 A That's how it's presented.

15 Q So CW mode is the continuous wave mode;
16 is that correct?

17 A Yes.

18 Q And the PW mode is a pulse wave mode,
19 correct?

20 A Yes.

21 Q Let's start watching again and watch
22 until a minute 8 second mark.

1 (Plays video.)

2 Let's go back to the 59 second mark.

3 In this part of the video, they're shown
4 two cartoons each representing needles
5 inserted into the skin; is that correct?

6 A That's what it looks like.

7 Q And the needles are supposed to be
8 represented by white triangles; is that
9 correct?

10 A That would be my understanding.

11 Q And the coagulation is supposed to be
12 shown in red; is that correct?

13 A That's -- that's how it's presented. I
14 see on the PW mode the coagulation is not a
15 solid but rather an open oval of red.

16 Q Let's go to the minute five mark.

17 TECH MIELCAREK: The video seems to be
18 four minutes and three seconds long,
19 counsel.

20 MR. AUTERI: Minute, five seconds
21 mark.

22 TECH MIELCAREK: Five seconds.

1 MR. AUTERI: Can we go back a little
2 bit, maybe two seconds.

3 Can you press play what's shown.

4 (Plays video.)

5 MR. AUTERI: Can I get control of the
6 video?

7 TECH MIELCAREK: Sure. One second
8 please.

9 THE WITNESS: Can I take a one minute
10 break.

11 MR. AUTERI: Why don't we go off the
12 record and take a five-minute break.

13 THE WITNESS: Sure.

14 MR. AUTERI: So be back around 11:20.

15 (Whereupon, a recess was taken
16 from 11:14 AM until 11:23 AM.)

17 MR. AUTERI: David, can we put up what
18 was the van der Weide Deposition
19 Exhibit 6, and start at minute and
20 five seconds.

21 Q So Dr. van der Weide, at the minute and
22 five second mark in Exhibit 2099, the video

1 zooms in on the Sylfirm X's PW mode

2 representation, correct?

3 A I see that.

4 Q And the image for the Sylfirm X's P W

5 mode does not show any coagulation around

6 either of the electrodes; is that correct?

7 A I don't see a depiction. Frankly, it's

8 hard to know what's being depicted here. But

9 I don't see any. It's not the same as the CW

10 mode.

11 Q This representation also shows a red

12 squiggly line of coagulation not fully extend

13 to one electrode to another; is that correct?

14 A Certainly shows in red variable squiggly

15 line that is across the entire cartoon, so it

16 doesn't appear to be dependent on the

17 electrodes at all.

18 Q And you agree that the Sylfirm X video

19 representation of the PW mode's coagulation

20 indicates that the PW mode would not practice

21 the independent claims of the '836 Patent, do

22 you agree?

1 A Well, it -- frankly, I wasn't asked to
2 investigate an answer to that question
3 previously and as I've already indicated,
4 it's not entirely clear to me what with or
5 without some further explanation, what is
6 being depicted here in the PW mode cartoon.
7 And as I also indicated I performed my own
8 independent experiments to affirm my
9 understanding of the claimed invention, so
10 that didn't include the use of the pulse wave
11 mode. I don't really have a lot of basis for
12 opining on this cartoon.

13 Q So just to confirm your opinions that
14 the Sylfirm X practices the claim limitations
15 in your declaration is limited to the Sylfirm
16 X's CW mode; is that correct?

17 A Well, in as much as there's a contrast
18 depicted between the two modes, I would
19 agree. Although, in the particular settings
20 would have to be analyzed on their own.
21 Right now there's no -- I've been provided
22 with no numbers, no detail, just a statement

1 PW mode versus CW mode here. So that on its
2 own isn't necessarily sufficient to make a
3 determination of exactly how this thing is
4 being operated, especially in pulse wave
5 mode, which I understand the pulses can be a
6 varying duration. So, It's just not enough
7 information here to make a definitive
8 statement beyond the fact that it's
9 distinguishing between these two modes of
10 operation.

11 Q And earlier we discussed that you had
12 performed some heat mapping, which I believe
13 you said confirms your understanding which
14 devices practice the claimed coagulation
15 representation, is that an accurate
16 representation of what you said?

17 A I think that's a fair summary.

18 Q And is it fair assumption that your heat
19 mapping test was focused on testing
20 parameters related to the Sylfirm X's CW
21 mode?

22 A My recollection is that I provided a

1 continuous wave excitation for the test that
2 I performed.

3 Q Would you agree your heat mapping tests
4 do not -- would not be indicative of what you
5 would expect to be the pulse wave mode to act
6 like in terms of where coagulation is formed?

7 A I wasn't asked to perform tests based on
8 a pulse wave mode, and I did not. So I don't
9 have any information.

10 Q Go back to your declaration, which I
11 said is van der Weide deposition Exhibit 3.

12 MR. AUTERI: David, if you could pull
13 back up deposition Exhibit 3.

14 TECH MIELCAREK: One second, please.

15 Q So in Paragraph 162 of your declaration
16 you refer to heat mapping test we were just
17 talking about; is that correct?

18 A That's correct.

19 Q And you cite to Exhibit 287; is that
20 correct?

21 A Yes.

22 MR. AUTERI: David, I'd like to mark

1 another exhibit. Let's make -- there
2 should be a document with the file
3 CX-2936C, let's make that van der
4 Weide Deposition Exhibit 7.

5 (Whereupon, RF Microneedle
6 Arrays: Thermal Results, Dr. van
7 der Weide, July 26, 2023 was
8 marked as Exhibit 7 for
9 identification as of this date.)

10 MR. AUTERI: And for housekeeping
11 purposes, that is Exhibit 2087 from
12 IPR 2024-0386.

13 TECH MIELCAREK: I'm sorry, counsel, I
14 see only one document with a CX in the
15 beginning of the file name and it ends
16 with 0355. You said C as in Charlie,
17 right CX?

18 MR. AUTERI: Yes, let me just throw it
19 into the chat for you.

20 Actually, sorry, the file name is
21 EX2087-heat mapping test, do you have
22 that one?

1 TECH MIELCAREK: I do, yes.

2 MR. AUTERI: Okay. Let's get that up,
3 sorry. And we'll make that van der
4 Weide Deposition Exhibit 7. And to
5 confirm that is Exhibit 2087 from
6 IPR 2024-00386.

7 TECH MIELCAREK: I'll bring it on the
8 screen in just a moment and I'll put
9 it in the chat.

10 Q Dr. van der Weide, what we're looking
11 at, Exhibit 2087 of the IPR is the heat
12 mapping test that you performed previously;
13 is that correct?

14 A That's correct.

15 Q And if we go to the first page, there is
16 a part that says, "Key: heat mapping peak
17 temperature above; base temperature below",
18 and next to it, it has a little image that
19 show as higher and lower number.

20 Do you see that?

21 A Yes.

22 Q So if we scroll down to the fourth page.

1 Scroll down to the fourth page.

2 To start, Dr. van der Weide, is this a
3 good size for you to see?

4 A Yeah, I can see that.

5 Q Okay. And so on Page 4 of your heat
6 mapping tests, there appears to be some
7 results shown next to the word BENEV; is that
8 correct?

9 A Yes.

10 Q And is it correct that this is the heat
11 mapping tests results for the Sylfirm X?

12 A I believe so.

13 Q And so in the image of the heat mapping
14 test there is what seems to be a rainbow
15 spectrum shown on the right, correct?

16 A Yeah, that's indicative of a temperature
17 gradient.

18 Q And highest -- the lowest number on the
19 temperature gradient is 0.3 degrees Celsius;
20 is that correct?

21 A Right. That's above ambient.

22 Q So what is ambient temperature?

1 A Approximately, room temperature. I --
2 that'd be 20 or 21 degrees Celsius.

3 Q So then that would mean the -- for the
4 heat mapping test for Sylfirm X -- the lowest
5 temperature in the heat mapping gradient is
6 about 20.3 to 21.3 degrees Celsius?

7 A For this particular test, yes.

8 Q And the highest temperature gradient for
9 this particular test was 7.7 degrees Celsius
10 above ambient temperature; is that correct?

11 A That's right.

12 Q So the highest temperature recorded in
13 this test for Sylfirm X was somewhere around
14 27.7 degrees Celsius to 28.7 degrees Celsius;
15 is that correct?

16 A Right.

17 Q Is it correct to say your heat mapping
18 tests showed the temperature was hottest
19 immediately around each electrode?

20 A That's consistent with the presentation
21 here.

22 Q Earlier when we looked at -- that

1 coagulation occurs at around, approximately,
2 58 to 85 degrees Celsius; is that correct?

3 A That's what the cartoon says, yes.

4 Q Do you agree if, in practice, the
5 Sylfirm X -- strike that question.

6 Would you agree that if in a clinical
7 setting, the Sylfirm X's highest temperature
8 produced was around 28.7 degrees Celsius,
9 then the temperatures would not have reached
10 the sufficient range to cause any coagulation
11 in human tissue; is that correct?

12 A So just for clarity, I'm not sure I
13 heard the first qualifying word.

14 Is this a hypothetical?

15 Q Sure. I guess -- yeah, I think it could
16 be categorized as a hypothetical. I could
17 re-ask it.

18 If in the situation -- if the Sylfirm X,
19 when used in a clinical setting, only reached
20 the temperature shown in your heat mapping
21 tests, then the Sylfirm X would not produce
22 heat high enough to the cause coagulation; is

1 that correct?

2 A Well, there's a couple of caveats here,
3 of course. Human body is not at room
4 temperature; basal temperature is much
5 higher. This is showing temperature
6 elevation above base temperature. So the
7 heat mapping tests need to be understood in
8 their proper context. These are not clinical
9 evaluations in the living human skin of a
10 patient.

11 These were performed to understand the
12 relative temperature distribution under CW
13 mode for the needle rays with the specified
14 radio frequency -- frequency, power, and
15 duration. To confirm my understanding of the
16 relative temperature around the needles
17 versus between the needles.

18 So it's important to understand that
19 these are not clinical measurements or
20 results. They were not performed on human
21 tissue. So I provide all that because I'm
22 quite concerned with the very much

1 apples-to-oranges comparison that seemed --
2 that I do not wish to provide.

3 In other words, the question posed a
4 hypothetical that is not based on measurement
5 that I made. As I clearly stated, I did not
6 make measurements in living -- on living
7 human subjects in living tissue. So I'm not
8 sure that the answer to the question can have
9 appropriate clinical relevance other than
10 the -- I mean, other than the extent to which
11 I measured the temperature distribution in a
12 tissue stimulant.

13 Q Is it a fair assumption that the devices
14 listed in your heat mapping test would
15 generate higher temperatures when used in
16 clinical settings than the temperatures you
17 saw in your heat mapping test?

18 A Again, they are certainly capable of
19 generating much higher temperatures. One of
20 skill understands that the temperature that
21 results is a function of several variables,
22 not the least of which is the power level and

1 the actual deposited power. Because one of
2 skill also understands the presence of
3 reflected energy and the question of an
4 impedance match between a needle array and
5 the source.

6 The duration of the application of
7 energy is -- and the conditions of the
8 dielectric conditions of the sample, which in
9 this case, was a uniform tissue simulant not
10 an epidermis, dermis layer of, you know,
11 excised or living human skin.

12 So there, you know, are a number of
13 factors that I attempted to control for in
14 order simply answer the question: Where is
15 the temperature highest relatively speaking?

16 I did not attempt to achieve an absolute
17 temperature that would have indicated a
18 certain irreversible coagulation effect.

19 So these heat mapping experiments need
20 to be understood in their proper context and
21 with the limitations that surround them.

22 Q I guess one question I had was: We had

1 earlier looked up that coagulation occurs at
2 approximately 58 to 85 degrees Celsius. And
3 when we look at the heat mapping tests, at
4 least were the Sylfirm X, the highest
5 temperature reached was not within the
6 coagulation zone.

7 So my question is: Was there something
8 about how you performed the test that would
9 have lowered the temperature that you
10 measured -- strike that question. Let me ask
11 you a little bit better of a question.

12 Let's look at Page 6. Page 6 of
13 Exhibit 2087.

14 Do you see it refers to ILOODA?

15 A I do.

16 Q ILOODA was a respondent in the ITC case
17 that you were involved with, that involved
18 the '836 Patent; is that correct?

19 A Yeah, that's my recollection.

20 Q And you opined the ILOODA device
21 produced the claimed coagulation limitation;
22 is that correct?

1 A I certainly opined that the ILOODA
2 device produced the temperature gradients
3 consistent with the claims of the '836
4 Patent; and that was around the needles
5 rather than between the needles.

6 Q Is it correct to say the highest
7 temperature you recorded in your heat mapping
8 test for the ILOODA device was 24.4 degrees
9 Celsius over ambient temperature?

10 A For this experiment, that's what my
11 results showed, yes.

12 Q And so that would be about 44.4 degrees
13 Celsius to 45.4 degrees Celsius?

14 A Right.

15 Q And again, that would be a temperature
16 that is below what is required to cause
17 coagulation; is that correct?

18 A Well, again, this question is pretty
19 much an apples-to-oranges question for all
20 the reasons I previously provided.

21 So the heat mapping test that I did, as
22 I stated previously, weren't done to skin

1 with a -- an intent of determining what
2 temperature threshold could be reached. And
3 there are many explanations for that,
4 including, if you scroll back to the photo of
5 all the different applicators and cables that
6 I provided in this report, right there.

7 That clearly depicts the way in which I
8 was able to make these connections to these
9 cables was necessarily subject to variability
10 due to variation among the construction of
11 these probe arrays.

12 One of skill understands that the
13 radiofrequency impedance matching that would
14 result from this necessarily variable way of
15 connecting these radiofrequency cables to the
16 corresponding needle arrays, could result in
17 significant differences in reflection
18 coefficient of energy, the wave emanating
19 from the generator. And thus, the deposition
20 of radiofrequency power into the simulated
21 tissue would be subject to variability at
22 least due to that factor.

1 And I say this to substantiate the
2 reasons for the variable temperatures in
3 terms of absolute numbers that I provided for
4 these different respondents' devices. This
5 is a long-winded way of saying: It's not
6 proper to read too much into these heat
7 mapping tests when -- in view of all of the
8 variability that resulted.

9 They were, rather, simply to provide
10 confirmation of the highest temperatures
11 being around as opposed to between the
12 needles. And attempting to read in absolute
13 numbers of temperature that I observed for
14 any of one of these experiments into a tissue
15 effect would be improper, because I wasn't
16 asked to do that, nor is it an
17 apples-to-apples comparison.

18 Q And then if you go to page -- on Page 8
19 of Exhibit 2087, it says Lutronic. That
20 refers to one of the respondents that was
21 accused of infringement in the ITC case that
22 you were previously involved with the '836

1 Patent?

2 A Yes.

3 Q And is it correct to say you opined that
4 the Lutronic device caused coagulation around
5 but not between electrodes?

6 A Yes.

7 Q And in this one, the highest temperature
8 gradient -- strike that.

9 And this heat mapping test for Lutronic,
10 it shows the highest heat recorded would be
11 about 41 Celsius to 42 Celsius, when
12 considering the ambient temperature?

13 A That would be correct.

14 Q And on the next page, Page 9, the --
15 where it says, "Rohrer," that indicates that
16 this heat mapping test relates to the
17 Respondent Rohrer from the ITC investigation
18 you were previously involved with?

19 A That's correct.

20 Q And did you previously opine that
21 Rohrer's device produced coagulation around
22 but not between the electrodes?

1 A Yes.

2 Q And this one, the highest temperature
3 recorded when considering ambient temperature
4 would be around 21.3 degrees Celsius to 22.3
5 degrees Celsius?

6 A That's what it says.

7 Q If we go to the next page, Page 12,
8 there is a reference to Vivace Ultra, is it
9 correct to say that this page of the heat
10 mapping test refers to heat mapping tests for
11 the Vivace Ultra?

12 A Yes.

13 Q And the Vivace Ultra was one of the
14 devices that you opined produces the
15 coagulation around but not between the
16 limitation?

17 A Yes.

18 Q And the highest temperature recorded
19 would have been about 27.1 degrees Celsius to
20 28.1 degrees Celsius?

21 A In this nonliving tissue simulated at
22 room temperature, yes. As is true for all

1 the other answers, Counselor.

2 Q And then this last one, just to confirm,
3 on Page 5, there's heat mapping tests for the
4 Endymed device, correct?

5 A The last page I have is --

6 Q Last page I'm going to look at. Sorry.
7 It's the -- I should have been clearer. It's
8 Page 5 of the heat mapping tests.

9 A I'm with you. Yes, I see that.

10 Q And so this is the heat mapping tests
11 for the Endymed device; is that correct?

12 A That's correct.

13 Q And have you opined the Endymed device
14 produces the claimed coagulation around but
15 not between electrodes; is that correct?

16 A Yes.

17 Q And next to -- in the highest
18 temperature recorded when considering ambient
19 temperature was about 88.7 degrees Celsius to
20 89.7 degrees Celsius; is that correct?

21 A Again, with all the answers I previously
22 offered, yes.

1 Q Next to the word "Endymed" it says,
2 "2 MHz." That refers to 2 megahertz; is that
3 correct?

4 A Yes. That's what it says there.

5 Q So I don't know if you recall, but the
6 Endymed -- strike that.

7 Do you recall if the Endymed device
8 operates at 1 megahertz in reality?

9 A I do.

10 Q And do you -- is it your opinion that
11 difference doesn't change your opinion in
12 terms of whether the Endymed device creates
13 the coagulation?

14 A My opinion doesn't change.

15 MR. AUTERI: Can we go off the record
16 and take a five-minute break?

17 THE WITNESS: Sure.

18 (Whereupon, a recess was taken
19 from 11:57 AM until 12:02 PM.)

20 MR. AUTERI: I'm done with my
21 questions. So I will turn it over to
22 Mr. Sanders, if he has any questions.

1 MR. SANDERS: Sure. Why don't we go
2 back off the record.

3 (Whereupon, a recess was taken
4 from 12:02 PM until 12:08 PM.)

5 EXAMINATION BY

6 MR. SANDERS:

7 Q Do you recall that you were asked
8 towards the start of this deposition about
9 your opining on infringement and validity in
10 a case in the International Trade Commission?

11 A I do.

12 Q Do you recall that you were asked about
13 your opinions about the Sylfirm X practicing
14 the '836 Patent?

15 A I do.

16 Q Was that an issue you addressed in the
17 case in the International Trade Commission as
18 well?

19 A I recall having addressed that issue.

20 Q Do you have an understanding of whether
21 the International Trade Commission has
22 reached a decision on those issues?

1 A I've been informed of that.

2 MR. SANDERS: What is the next exhibit
3 number?

4 It's a question for the technician.

5 TECH MIELCAREK: We are up to, sorry,
6 the next exhibit will be 8.

7 MR. SANDERS: Exhibit 8. All right.

8 I've uploaded what will be Exhibit 8
9 into the chat and I will put it on the
10 screen.

11 (Whereupon, Initial
12 Determination on Violation of
13 Section 337 and Recommended
14 Determination on Remedy and Bond
15 was marked as Exhibit 8 for
16 identification as of this date.)

17 Q Exhibit 8 to your deposition is the
18 public version of the initial determination
19 and violation of Section 337 and recommended
20 determination on remedy and bond.

21 Do you see that?

22 A I do.

1 Q Do you recall that you were asked about
2 the Hantash reference?

3 A I recall that.

4 Q I'd like to direct your attention to
5 Page 140 of the initial determination. I
6 will take us there.

7 A Okay.

8 Q All right. Are you able to see and read
9 Page 140?

10 A I am, and I have it on my own screen as
11 well.

12 Q Perfect. And I'd like to direct your
13 attention to the second full paragraph that
14 begins "Moreover."

15 Do you see that?

16 A Yes.

17 Q And the initial determination states:

18 "Moreover, as Dr. van der Weide
19 explained, one of ordinary skill in the art
20 would not have been motivated to combine Ganz
21 with Hantash, because Ganz teaches 'removal
22 of tissue' to create holes around the

1 electrodes and leaving regions between them
2 untouched (as discussed above in
3 Section VII.D.3(c)), while Hantash teaches
4 causing thermal damage 'between electrodes.'"

5 Do you see that?

6 A Yes.

7 Q Does that statement correctly reflect
8 your opinion?

9 A It does.

10 Q And do you recall you were asked about
11 your heat mapping test toward the end of your
12 deposition?

13 A Yes.

14 Q I'd like to direct your attention to
15 Page 84 of the initial determination. Take a
16 second and you can look around in your own
17 copy if that's easier.

18 A Okay.

19 Q Typically, on Page 84, I'd like to
20 direct your attention in the paragraph in the
21 middle of the page that begins "Second," to
22 the very last sentence of that paragraph that

1 begins "As discussed above."

2 Do you see that?

3 A Yes.

4 Q It states:

5 "As discussed above, the heat
6 mapping tests that Dr. van der Weide
7 performed reflect with the RF energy is
8 applied, that is, it is concentrated
9 around the needle electrodes rather
10 than in between them."

11 Do you see that?

12 A Yes, I do.

13 Q Does that statement accurately
14 characterize your heat mapping test?

15 A It does.

16 Q Now, do you recall you were asked about
17 any heat mapping tests the Sylfirm X as well
18 as the respondent devices, ILOODA, Lutronic,
19 Rohrer, Vivace Ultra and Endymed?

20 A I recall that.

21 Q Now, let's first focus on the Sylfirm X.
22 I'd like to direct your attention to

1 Page 107.

2 A Okay.

3 Q And do you have an understanding whether
4 Serendia's mass industry product was the
5 Sylfirm X product?

6 A Yes. That's my understanding.

7 Q And do you see at the top of Page 107,
8 there is a portion of Claim 1 of the '836
9 Patent that includes the limitation
10 configured to cause coagulation around each
11 electrode rather than coagulating between the
12 electrodes?

13 A Yes.

14 Q Now, I'd like to direct your attention
15 to Page 108. And specifically to the
16 sentence that begins, "Accordingly," that
17 starts the second paragraph.

18 Do you see that?

19 A I see it.

20 Q Do you see in the initial determination
21 bonds:

22 "Accordingly, Serendia has proven

1 by a preponderance of the evidence that
2 the DI products meet this limitation of
3 Claim 1 of the '836 Patent"?

4 A I see that.

5 Q Now, I'd like to turn to the respondent
6 products.

7 Do you recall that in the case in the
8 International Trade Commission, respondents,
9 which included ILOODA, Lutronic, Rohrer and
10 the Vivace Ultra manufacturer and Endymed,
11 disputed that their devices performed
12 coagulation?

13 A I have that recollection.

14 Q And do you recall addressing the
15 respondents' FDA filings in your testimony in
16 the International Trade Commission?

17 A Yes.

18 Q I'd like to direct your attention to
19 Page 55 of the initial determination. I will
20 take us there.

21 A Okay.

22 Q Specifically, I'd like to direct your

1 attention to the full paragraph on that page
2 that begins "As discussed below."

3 Do you see that?

4 A I do.

5 Q Can you see the initial determination
6 finds:

7 "As discussed below, respondents
8 made unequivocal representations to the
9 FDA in their 510(k) submissions which
10 demonstrated again, unequivocally, that
11 the accused products practice the
12 asserted claims of the '836 Patent.
13 Namely, the coagulation limitation
14 recited in independent Claims 1
15 (asserted) and 14 (not asserted) from
16 which asserted Claims 9 and 22 depend,
17 and which respondents hotly disputed."

18 Do you see that finding?

19 A I do.

20 Q And I'd like to direct your attention to
21 the next page, Page 56, of the initial
22 determination.

1 Specifically to the paragraph that
2 begins "For the following reasons."

3 Do you see that?

4 A I do.

5 Q And the initial determination finds:

6 "For the following reasons which
7 elaborate on the points above,
8 respondents feeble and uncredible
9 attempts to discredit the explicit
10 language of the certified
11 representations they themselves made to
12 the FDA in their 510(k) submissions to
13 advance their non-infringement
14 coagulants in this investigation have
15 been found to be neither credible nor
16 persuasive. Not to mention
17 disingenuous and potentially ethically
18 questioned."

19 Do you see that finding?

20 A I do.

21 Q And, then, I'd like to direct your
22 attention to Page 70 of the initial

1 determination.

2 A Okay.

3 Q And specifically to the paragraph that
4 begins "As Staff noted."

5 Do you see that?

6 A I do.

7 Q And in particular, I'd like to direct
8 your attention to the second sentence in that
9 paragraph that begins "Either way."

10 Do you see that?

11 A Yes.

12 Q Do you see the initial determination
13 finds:

14 "Either way, respondents attempts
15 to dismiss or walk away from how they
16 have characterized the accused products
17 to the FDA are not only unpersuasive,
18 but also run dangerously close to
19 crossing ethical lines of transparency
20 that are required in making
21 representations to the FDA to obtain
22 regulatory clearance of the accused

1 products."

2 Do you see that finding?

3 A Yes.

4 Q Do you recall you were asked a
5 hypothetical relating to your heat mapping
6 test and coagulation using the Sylfirm X?

7 A I recall that.

8 Q I'm going to upload one more exhibit.

9 A I have it.

10

11 (Whereupon, Summary for 510K by
12 K213612 from the FDA was marked
13 as Exhibit 9 for identification
14 as of this date.)

15 Q This is Exhibit 9, which is the summary
16 for 510(k) by K213612, from the FDA.

17 I'd like to direct your attention to the
18 first page of it.

19 Do you see that the trade device is the
20 Sylfirm X?

21 A Yes.

22 Q I'd like to direct your attention to a

1 few different portions of the document.

2 First is on PDF Page 3.

3 Did you see at the top the heading

4 "Indication for use"?

5 A I do.

6 Q Do you see that the indications for use

7 that is described is the Sylfirm X is

8 intended for use in dermatologic procedures

9 for electrocoagulation and hemostasis?

10 A I see that.

11 Q Now, I'd like to direct your attention

12 to Page 5 of the PDF. Excuse me.

13 You see there is a Section 5 there,

14 description of the device?

15 A I see that.

16 Q I'd like to direct your attention to the

17 second to last sentence in the paragraph on

18 that page. Do you see it states:

19 "As the RF signal passes through

20 the skin, it generates an electro

21 thermal reaction which is capable of

22 coagulating the tissue"?

1 A Yes. I see that sentence.

2 Q Can you tell us whether that statement
3 is consistent with your opinion of how the
4 Sylfirm X coagulates?

5 A It's consistent with my opinion
6 expressed.

7 Q Finally, I'd like to direct your
8 attention to Page 6 of the PDF.

9 Do you see there is a Table 1 there,
10 "Comparison of proposed device to predicate
11 device"?

12 A I see that.

13 Q And the device name for both of those
14 devices in the table is Sylfirm X, right?

15 A Yes.

16 Q And in the indications for use, for both
17 of those devices, there is identified,
18 dermatological procedures for electrical
19 coagulation and hemostasis and the predicate
20 device adds general surgical procedures, too,
21 right?

22 A I see that.

1 Q And then, I'd like to direct your
2 attention to the row labeled "Operation
3 type."

4 Do you see that? It's toward the bottom
5 of the page.

6 A I do.

7 Q You see the operation type for both the
8 subject device and the predicate device is
9 coagulation?

10 A I see that.

11 MR. SANDERS: Thank you, Doctor. No
12 further questions.

13 MR. AUTERI: A couple questions.

14 Can we pull back up what was marked as
15 Deposition Exhibit 9?

16 TECH MIELCAREK: Just a moment,
17 Counsel.

18 Coming up on screen right now.

19 EXAMINATION BY

20 MR. AUTERI:

21 Q On Page 3, you were asked about what the
22 indications for uses that describe -- scratch

1 that.

2 Do you recall being asked about Page 3
3 of Exhibit 9, specifically about the
4 indications for use of Sylfirm X?

5 A I do.

6 Q And this document lists the indications
7 for use for the Sylfirm X as being for use in
8 dermatological procedures for
9 electrocoagulation and hemostasis; is that
10 correct?

11 A Technically, it says dermatologic, not
12 logical, but I agree.

13 Q This indication for use statement
14 doesn't mention where the coagulation is and
15 isn't in relation to the electrodes; is that
16 correct?

17 A I don't see that specific level of
18 detail indicated here.

19 Q Just to confirm, the '836 Patent doesn't
20 just require to generate coagulation, it
21 requires creating coagulation around and not
22 between electrodes; is that correct?

1 A That's my general recollection. I'd
2 like to see the claim language to -- I'd
3 refer to the patent claim language itself for
4 final confirmation.

5 Q Would you agree that this sentence alone
6 that Mr. Sanders just showed you, in no way
7 indicates that the Sylfirm X would practice
8 the claimed coagulation limitation
9 specifically, correct?

10 A I don't see the claim language
11 reproduced here in this document.

12 Q And you agree, just because a device
13 produces electrocoagulation doesn't
14 necessarily mean that it produces the claimed
15 coagulation of the '836 Patent; is that
16 correct?

17 A Very general statement, and I'm sure
18 there are devices that produce
19 electrocoagulation but do not practice the
20 claims of the '836 Patent.

21 Q Go to Page 4, Page 3, do you recall
22 being asked questions about the description

1 of the Sylfirm X that is found on Page 3 of
2 Deposition Exhibit 9?

3 A I do.

4 Q And you were specifically asked about
5 the second to last sentence; is that correct?

6 A That's correct.

7 Q And that second to last sentence simply
8 says that Sylfirm X is capable of coagulating
9 tissue, correct?

10 A That's what it says there.

11 Q It doesn't -- this document doesn't say
12 where the coagulation would form and where it
13 would not form in relation to the electrode;
14 is that correct?

15 A This particular paragraph does not speak
16 to that level of detail, agree with that.

17 Q Go to the next page, Page 4, you were
18 asked about the indications for use found at
19 the top of Page 4 of this document; is that
20 correct?

21 A Yes.

22 Q And again, the indications for use is

1 listed for Sylfirm X is intended for use in
2 dermatologic procedures for
3 electrocoagulation and hemostasis.

4 Do you agree that the sentence does not
5 say where the coagulation forms and where it
6 does not form in relation to the electrode;
7 is that correct?

8 A It doesn't have any level of that level
9 of detail in that sentence.

10 Q And if we scroll down on that same page
11 you were asked about the operation type
12 that's shown, which shows coagulation.

13 Is it correct that this page does not
14 say where the coagulation is located, where
15 it is not located in relation to the
16 electrodes?

17 A I don't see any description of the level
18 of detail on this page.

19 Q Is it correct to say that nothing
20 Mr. Sanders showed you today on this document
21 refers to where the coagulation forms and
22 where it does not form in relation to the

1 needles?

2 A I do not see anything at that level of
3 detail in document.

4 MR. AUTERI: And can I mark another
5 Exhibit.

6 It'll be, I'm going throw it in the
7 chat. This should be Exhibit -- van
8 der Weide Exhibit 10, it's a
9 confidential Exhibit with some Endymed
10 CBI.

11 So we'll have to mark this deposition
12 confidential. Let me know when it's
13 ready.

14 (Whereupon, Traditional 510(k)
15 Submission - Intensif Applicator
16 was marked as Exhibit 10 for
17 identification as of this date.)

18 MR. AUTERI: For housekeeping, the
19 exhibit was going to be Dr. van der
20 Weide Exhibit 10 is what was CX-0339C
21 on the ITC investigation involving
22 Serendia and Endymed. It was also

1 Exhibit 12 to the corporate
2 representative Dr. Sima Witman's
3 deposition in the ITC trial.

4 Before we pull up Exhibit 10, can we
5 actually go back to what was marked as
6 Exhibit 8?

7 TECH MIELCAREK: Just a moment,
8 please.

9 Q Dr. van der Weide, do you recall being
10 asked questions about Page 55 of the public
11 version of final initial determination for
12 the ITC investigation you were involved in?

13 A I want to just get there to confirm.

14 Q Okay.

15 A Yes.

16 Q And you were asked a question about the
17 first sentence, "as discussed below,
18 respondents made unequivocal representations
19 to the FDA, in there 510(k) submissions which
20 demonstrate again unequivocally that the
21 accused products practice the asserted claims
22 of the '836 Patent, namely the coagulation

1 limitation recited in the independent claims
2 1 (asserted) and 14 (not asserted) from which
3 claims 9 and 22 depend and which respondent
4 hotly disputed," you were asked a question
5 about it, right?

6 A I recall that.

7 Q The next sentence says, specifically in
8 and it redacts the sentence and right after
9 the redacted sentences, is two citations one
10 is CX-0166C and other is to CX-0339C,
11 correct?

12 A I see that.

13 Q And CX-0166C is the Potenza 510(k); is
14 that correct?

15 A Evidently.

16 Q And CX-0339C is the Intensif 510(k)?

17 A Again evidently.

18 MR. AUTERI: I'd like to bring up what
19 will be Exhibit 10 to Dr. van der
20 Weide's deposition.

21 TECH MIELCAREK: It is in the tab on
22 the right. Yep, there you go.

1 Q So Dr. van der Weide, this is the
2 document that was marked CX-0339C.

3 MR. SANDERS: Can you also put it in
4 the chat?

5 TECH MIELCAREK: It is in the chat.

6 MR. SANDERS: It hasn't shown up yet.

7 TECH MIELCAREK: Everybody, please
8 standby.

9 MR. AUTERI: To make sure for
10 housekeeping purposes what we have
11 marked as van der Weide Deposition
12 Exhibit 10 was trial Exhibit CX-0339C
13 from the ITC investigation that
14 involved the '836 Patent and concerned
15 the Respondents. It's also
16 Ms. Witman's Deposition Exhibit from
17 ITC Exhibit 12.

18 Q And Dr. van der Weide, have you had a
19 chance to download the document?

20 A Yes.

21 Q And have you seen this document before?

22 A I recall having seen this.

1 Q And this is the 510(k)K submission for
2 the Intensif applicator?

3 A That's what it appears to be.

4 Q That referred to the Endymed accused
5 product, correct?

6 A That's my understanding.

7 Q And this is the FDA statement that the
8 final initial determination was referring to;
9 is that correct?

10 A Is this 339C?

11 Q Correct. Let me scroll. This is the
12 CX-0339C, so does that confirm that this is
13 the FDA statement that the initial
14 determination said unequivocal
15 representations were made that the accused
16 products practices the coagulation
17 limitation?

18 A With the caveat that the public version
19 of that initial determination started on
20 Page 55 and going into Page 56 has many
21 sentences redacted, so I'm reading what it
22 says.

1 Q You're not aware of any other Endymed
2 510(k) statements other than CX-0339C,
3 correct?

4 A Not as I sit here.

5 Q And you have no reason to believe that
6 CX-0339 is not the document that -- strike
7 that question.

8 So let's look at, if we go back to
9 deposition Exhibit 8, specifically in the
10 sentence that refers to the representations
11 made to the FDA about the claim coagulation
12 limitation for the Intensif 510(k), the page
13 that's cited is Page 23; is that correct?

14 A That's what it says there.

15 Q If can we go back to deposition
16 Exhibit 10 and look at Page 23, there's a
17 Premarket Notification the truthful and
18 accurate statement; is that correct?

19 A It's not clear to me if the Page 23 is
20 referring to the PDF 23 or the actual marked
21 page so I just want to clarify that to make
22 sure I'm looking at the correct page.

1 I see a 22 down below and 23 on the
2 truthful and accurate statement, okay.

3 Q If we go to Page 13, we have the
4 classification for the Intensif applicator.

5 And the classification includes
6 electrosurgical cutting and coagulation
7 device and accessories; is that correct?

8 A I see that as the labeled
9 classification.

10 Q And while it references coagulation,
11 this part of this page does not say anything
12 about where the coagulation would be located
13 and or not located in relation to the Endymed
14 devices electrodes; is that correct?

15 A Yeah, I don't see that level of detail
16 indicated here.

17 Q And under the indications of use for the
18 Endymed device it says the Intensif
19 applicator is intended for use in
20 dermatologic and general surgical procedures
21 for electrocoagulation and hemostasis.

22 Is that the same indications for use

1 that the Sylfirm X had in their 510(k)?

2 A Sylfirm X intended for use in
3 dermatologic procedures for
4 electrocoagulation and hemostasis.

5 Q And similar to the Sylfirm X's
6 indications for use, the Endymed device does
7 not -- device 510(k) statement doesn't say
8 where the electrocoagulation will and will
9 not occur in relation to the electrode; is
10 that correct?

11 A It doesn't have that level of detail, I
12 agree.

13 Q Is it correct that the 510(k) statement
14 in total for Endymed would not include the
15 level of detail for you to know whether the
16 electrocoagulation is occurring around or
17 between electrodes?

18 MR. SANDERS: Objection. Vague.

19 A Can I have the question again, please?

20 Q Is it correct that the Endymed 510(k)
21 statement would not include the level of
22 detail necessary for you to be able to

1 determine whether the electrocoagulations
2 produced by the Endymed device would occur
3 around or between Endymed electrodes?

4 MR. SANDERS: Objection. Speculation.

5 A As I previously testified, I don't see
6 and didn't see that the Sylfirm X 510(k)
7 document included that level of detail
8 either. So it's not -- it's not a complete,
9 you know, absent understanding of how the
10 device actually does apply its energy, that
11 doesn't appear to be the level of detail
12 included in this document.

13 Q And if we go back to the '836 Patent,
14 which was van der Weide Exhibit 1, the claim
15 coagulation must be around each electrode
16 rather than between the electrodes; is that
17 correct?

18 A That's what the claim language says.

19 Q If we go back to van der Weide
20 Deposition Exhibit 8, look back at Page 55
21 where you were asked about the initial
22 determinations discussion of the Respondent's

1 unequivocal representations to FDA. Do you
2 see that in the paragraph you were asked
3 about by your counsel the ID states that the
4 Respondents unequivocally -- let's strike
5 that question.

6 So in what is van der Weide Deposition
7 Exhibit 8, on Page 55, you're asked about
8 unequivocal statements to the FDA that the
9 initial determination alleges the Respondents
10 made about and I quote, "the coagulation
11 limitation recited in independent Claims 1
12 (asserted) and 14 (not asserted) from which
13 asserted claims 9 and 22 depend." My
14 question to you is: The FDA statement we
15 looked at, at most shows that coagulations is
16 generated, does not show you the level of
17 detail needed to know whether it actually
18 generates the coagulation limitation recited
19 in the independent claims; is that correct?

20 MR. SANDERS: Objection. Vague.

21 A The statements to which I was directed
22 did not themselves contain that level of

1 detail.

2 Q Right. So is it fair to say the
3 Respondents did not unequivocally represent
4 to FDA that their devices caused coagulations
5 around rather than between electrodes?

6 MR. SANDERS: Objection.

7 Mischaracterizes the record.

8 A I disagree. The statements made in the
9 510(k) documents are in many cases, and this
10 is based on my own experience having worked
11 with 510(k) applications as well, there are
12 certain limitations to the language that can
13 be used in certain portions of the document.
14 That's why there's consistency between the
15 510(k) document, Sylfirm X and also this
16 Endymed document, there's restrictions on
17 what can be said and how it can be phrased.
18 So it's -- the question is asking me to
19 extrapolate from that very limited and
20 incomplete record into a much more elaborate
21 conclusion that's not justified on the basis
22 of at least the document's own intrinsic

1 limitations.

2 Q But you would agree that based on what
3 you've seen in the Endymed 510(k) statement,
4 it is only indicated coagulation would be
5 generated. It doesn't indicate where the
6 coagulation would be generated in relation to
7 the electrode; is that correct?

8 A Simply, that particular statement if I
9 scroll down, for example, PDF Page 46 of the
10 Endymed document, I see a cartoon indicating
11 a treatment effect around the needles rather
12 than between the needles which further
13 describes how Endymed is presenting its
14 device to the FDA. I haven't gone through
15 the entire document, I've just pointed out
16 that it's not proper to extrapolate from a
17 very limited statement about indication for
18 use and into the detailed nature of the
19 operation of any given device.

20 I could go on, but Figure 7-7 on PDF
21 Page 48 actually shows thermal effects using
22 the Intensif applicator on ex-vivo tissue

1 model. Clearly shows individual areas of
2 what appear to be higher temperature
3 corresponding to a needle.

4 Q I'm going attempt to make this a
5 readable size, please let me know if it's
6 not.

7 But you're referring to on Page 48, a
8 thermal image there is a heat scale to the
9 right; is that correct?

10 A I see that.

11 Q Is that the highest number shown there
12 that is, what 41.3 degrees?

13 A It's a little hard to read.

14 41. -- I can't tell if that's a 3 or a
15 0. But I would agree that it says 41 at
16 least.

17 Q 41 degrees. Is it correct to say that
18 41 degrees is below the temperature necessary
19 to cause coagulation?

20 A Well, counselor, it's clear to one of
21 skill that this is Agar, it's a tissue
22 simulant, very likely situated at room

1 temperature. Very much like my heat map. So
2 it's improper to equate this temperature to
3 what would be in a living human body where
4 the basal temperature is much higher than
5 room temperature.

6 Q You would agree that this heat mapping
7 image is not a very good piece of evidence to
8 rely on to determine whether the Endymed
9 device causes coagulation around rather than
10 between electrodes; is that correct?

11 A I agree that the caption of the figure
12 says, thermal effects using Intensif
13 applicator on ex-vivo tissue model (Agar) in
14 the parentheses.

15 Q What is Agar?

16 A It's kind of a gel that Endymed is using
17 as a tissue model.

18 Q Agar, would, I guess behave differently
19 than human tissue when heat is applied; is
20 that correct?

21 A It depends on how it was formulated. I
22 don't have any detail here on its dielectric

1 properties. I know in my laboratory we
2 formulate tissue stimulants with as faithful
3 a dielectric property that we can achieve, I
4 don't have any information here to make that
5 determination one way or the other.

6 MR. AUTERI: I will stop my question
7 here, if Mr. Sanders has any redirect,
8 I think it's actually his turn.

9 MR. SANDERS: I do.

10 EXAMINATION BY

11 MR. SANDERS:

12 BY MR. SANDERS:

13 Q I'd like to stay on the same page,
14 Page 48 of Exhibit 10, which was CX-339C, but
15 if counselor, if you kindly let me share the
16 page.

17 MR. AUTERI: David, is there ability
18 to give Mr. Sanders control of this
19 document?

20 Q Just looking at a very zoomed-in view of
21 Figure 7.7, right?

22 A That's correct.

1 Q I'd like to look at the statements that
2 Endymed had made in the 510(k) submission on
3 this page. The first statement I'd like to
4 look at is the statement right above
5 Figure 7-7.

6 Before we get to the statement itself,
7 do you recall being asked a line of
8 questioning suggesting that the temperature
9 would not be high enough for coagulation
10 based on what's shown in Figure 7-7?

11 A I recall the premise of the question,
12 and I also recall providing some corrective
13 opinion in response.

14 Q Do you see right above that Figure 7-7
15 Endymed stated in its 510(k) submission to
16 the FDA, "Laboratory evaluation has shown
17 consistent performance of the handpiece
18 allowing fractional skin coagulation"?

19 A I see that sentence.

20 Q And is that sentence -- let me start
21 again.

22 Can you tell us whether that sentence is

1 consistent with the evidence that you
2 reviewed regarding the Endymed product?

3 A It is consistent with my independent
4 observation of the Endymed product and heat
5 mapping experiments that I did.

6 Q Now I'd like to direct your attention to
7 the bottom of the page. Do you see there's a
8 Figure 7-8 there?

9 A I do.

10 Q And do you see it's described as
11 "histological effects on dermis and epidermis
12 after using Intensif applicator on ex-vivo
13 pig skin"?

14 A Yes. I see that that's the caption.

15 Q Do you see there's a statement under
16 that where Endymed told the FDA in its 510(k)
17 submission what the histology showed?

18 A Yes. I see that.

19 Q You see Endymed stated, "The histology
20 shows a coagulation depth of up to 1 mm with
21 a diameter of 300 micron"?

22 A Yes. That's what it says.

1 Q Then to finish off, I'd like to direct
2 your attention back to Exhibit 8, which is
3 the initial determination. And you recall
4 pointing out that the discussion at Page 55
5 of the initial determination regarding the
6 coagulation limitation continues on
7 subsequent pages?

8 A Yes.

9 Q I'd like to direct your attention to
10 Pages 78 of the initial determination and
11 specifically to the bottom of that page.

12 A Okay.

13 Q Do you see there's a paragraph that
14 begins "Endymed's admission is consistent
15 with the weight of other evidence that
16 conclusively reflect how Endymed's accused
17 products operate"?

18 A I see that sentence.

19 Q Now, if we go forward to Page 79, do you
20 see the next sentence states:

21 "For example, in Order 49, which
22 denied Endymed's motion to withdraw its

1 response to RFA No. 25, Endymed's
2 corporate testimony was found to,
3 quote, 'align with Endymed's admission
4 in its RFA No. 25 response that the
5 accused products have been used to
6 apply energy to cause coagulation
7 around each electrode"?

8 A I see that sentence.

9 MR. SANDERS: Thank you. No further
10 questions.

11 MR. AUTERI: One last line of
12 questions.

13 May I have control back over? I
14 wanted to look at Deposition
15 Exhibit 10.

16 EXAMINATION BY

17 MR. AUTERI:

18 Q Dr. van der Weide, do you recall being
19 asked questions about the Figure 7-8, that
20 appears on Page 48 of Deposition Exhibit 10?

21 A Yes.

22 Q And Figure 7-8 shows the histological

1 result of where the coagulation would be used
2 in the Intensif applicator; is that correct?

3 A It says "histological effects," but in
4 general that's what it is referring -- it's
5 referring to those histology results
6 presented immediately above that caption.

7 Q And in the Figure 7-8 only a single area
8 of coagulation is shown in each image; is
9 that correct?

10 A The section of tissue that is provided
11 appears to show -- there's no scale bar here,
12 so there's a darkened portion that evidently
13 extends into the dermis of the ex-vivo pig
14 skin.

15 Q And we saw the '836 Patent's independent
16 claims require a plurality of electrodes,
17 correct?

18 A I agree with that.

19 Q Right. And so a plurality means there
20 is more than one electrode, correct?

21 A Agree with that.

22 Q And the claims require coagulation

1 around each electrode, correct?

2 A Well, limited, yes.

3 Q Great. And so you would need to show
4 coagulation around at least two electrodes to
5 show coagulation around each of a plurality
6 of electrodes; is that correct?

7 A Well, if the premise of the question is
8 that the Figure 7-8 in the Endymed 510(k)
9 submission does not show the effects of a
10 plurality of electrodes, I don't agree with
11 the premise of the question. So I'm not sure
12 how to answer.

13 Q So does that mean in Figure 7-8
14 coagulation formed only around one electrode
15 of a plurality of electrodes?

16 A Figure 7-8 is showing a tissue slice.
17 So without seeing the full tissue that was
18 treated, it's not possible to make a
19 determination of how many electrodes are
20 actually involved in the actual treatment or
21 experiment. This is just a single slice. So
22 it's not, in and of itself, determinative of

1 the number of electrodes used. It's just
2 zooming in on one particular zone of
3 treatment.

4 You can't -- one of skill can't look at
5 this and say there was only one electrode
6 used. There's just an image of the effect
7 showing a single darkened spot. But it's a
8 tissue slice.

9 Q Right. And if you look at this tissue
10 slice, you have no way of knowing whether a
11 second electrode is even used; is that
12 correct?

13 A Well, independent of the context of the
14 rest of the document, which does indicate a
15 plurality of electrodes, just looking at this
16 one alone, independent of context, there's --
17 it's -- it's not possible to make a
18 determination of how many electrodes were
19 used in the experiment, as I previously said.

20 Q Right. And so if we can only see one
21 zone of coagulation in the histological
22 effects, you can't use this image to

1 determine whether coagulation formed around
2 each of a plurality of electrodes rather than
3 between the plurality?

4 A It's -- this presentation, this tissue
5 slice, this is a very common, is -- this does
6 not show the entirety of the treatment cell.

7 Q Would you agree that the -- this tissue
8 sample is not in a plane that would allow you
9 to know other coagulation was generated
10 around rather than between a plurality of
11 electrodes?

12 A I think one of skill reading the
13 entirety of the document, including
14 Figure 7-6 that I previously pointed to,
15 would understand that this is just a
16 zoomed-in version. And indeed, in Figure 7-7
17 immediately above it also shows a plurality
18 of electrode effects.

19 Q But figure 7-8 cannot be a zoomed-in
20 version of 7-7 because 7-7 is the effects on
21 agar whereas 7-8 is on the ex-vivo pig skin.

22 Do you agree?

1 A I agree that they are applications to
2 different materials.

3 Q And can agar coagulate?

4 A It is a polymer and it -- although I
5 don't have a scientific reference in front of
6 me to definitively answer that question, it
7 would not surprise me that -- would not
8 surprise me if there is an irreversible
9 effect due to temperature rise in power.

10 Q Just to confirm, agar is a tissue model;
11 it's not actually tissue, correct?

12 A It's tissue model.

13 Q And agar doesn't have collagen, does it?

14 A Well, it depends on how it's made. I
15 mean, as I previously mentioned, my
16 laboratory is making skin simulants using
17 collagen and other polymers. We have a
18 variety of different recipes. So I'm aware
19 of many ways in which to blend polymers that
20 include collagen to study these effects. I
21 don't have any further information based on
22 the caption in Figure 7-7 to understand the

1 details of how this tissue model was actually
2 formulated.

3 MR. AUTERI: That's it for questions
4 for me unless Mr. Sanders has another
5 round.

6 MR. SANDERS: No further questions.

7 MR. AUTERI: I think we can go off the
8 record and let Mr. van der Weide enjoy
9 the rest of his day, whether he did a
10 deposition.

11 THE WITNESS: Well, I appreciate
12 finishing up sooner than I expected.
13 But that leaves the rest of the day,
14 that's true.

15 MR. SANDERS: Regular delivery.

16 MR. AUTERI: And just to confirm for
17 the transcripts, if we can confirm
18 that the exhibits are separate from
19 the transcripts. I know sometimes
20 they embed PDFs, but I'm not that
21 savvy. I prefer them to be separate
22 documents if possible.

1 (Whereupon, this examination was
2 concluded at 1:14 PM.)
3
4

5 _____
6 DR. DANIEL W. VAN DER WEIDE
7

8
9 Subscribed and sworn to
10 before me on this ____ day
11 of _____, _____.

12 _____
13 Notary Public
14
15
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I N D E X

WITNESS: DR. DANIEL W. VAN DER WEIDE

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C E R T I F I C A T E

I, KIARA MILLER,
A Shorthand Reporter and Notary Public of the
State of New York, do hereby certify:

That the witness whose examination is
hereinbefore set forth, was duly sworn or
affirmed by me, and the foregoing transcript is
a true record of the testimony given by such
witness.

I further certify that I am not related to any
of the parties to this action by blood or
marriage, and that I am in no way interested in
the outcome of this matter.

Kiara Miller

KIARA MILLER

A			
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Transcript of Daniel W. Van Der Weide, Ph.D.
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