	Page 1
1	
2	UNITED STATES PATENT AND TRADEMARK OFFICE
3	BEFORE THE PATENT TRIAL AND APPEAL BOARD
4	WATSON LABORATORIES, INC., )
5	Petitioner, )
6	vs. ) IPR NO. 2017-01621
7	UNITED THERAPEUTICS CORP., ) IPR NO. 2017-01622
8	Patent Owner. )
9	
10	The videotaped deposition of MAUREEN
11	DONOVAN, Ph.D., called for examination, taken
12	pursuant to the Federal Rules of Civil Procedure
13	of the United States District Courts pertaining to
14	the taking of depositions, taken before Lynn A.
15	McCauley, CSR No. 84-003268, RPR, a Certified
16	Shorthand Reporter of the State of Illinois, at
17	35 West Wacker Drive, 47th Floor, Chicago, Illinois,
18	on May 24, 2018, at 9:41 a.m.
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1		
2	PRESENT:	
3	WINSTON & STRAWN, LLP	
	35 West Wacker Drive	
4	Chicago, Illinois 60601	
	312-558-5600	
5	BY: KURT A. MATHAS, ESQ.	
	kmathas@winston.com	
6	Appeared on behalf of Petitioner;	
7		
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	1700 K Street, NW, Fifth Floor	
9	Washington, D.C. 20006-3817	
	202-973-8812	
10	BY: VERONICA S. ASCARRUNZ, ESQ.	
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11	Appeared on behalf of Patent Owner;	
12		
	and	
13		
14	FOLEY & LARDNER, LLP	
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17	Appeared on behalf of Patent Owner.	
18		
19	ALSO PRESENT:	
20	MR. JEREMY MANGAN, Videographer.	
21		
22		
23		
24		
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2	WITNESS:			
	MAUREEN DONOVAN, Ph.D.			
3				
	EXAMINATION BY:		PG	LN
4	MS. ASCARRUNZ		5	10
	MR. MATHAS		118	6
5				
	EXHIBITS: DES	CRIPTION	PG	LN
6	None Marked			
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1	MAUREEN DONOVAN, Ph.D.
2	THE VIDEOGRAPHER: We are now on the record.
3	Today's date is May 24, 2018, and
4	the time is now 9:41 a.m.
5	This deposition is taking place at
6	35 West Wacker Drive, Chicago, Illinois.
7	The caption of this case is Watson
8	Laboratories, Inc. versus United Therapeutics.
9	This case is being held in the U.S.
10	Patent and Trademark Office before the Patent and
11	Trial Appeal Board.
12	Today's witness is Maureen Donovan.
13	Will attorneys please identify
14	themselves.
15	MS. ASCARRUNZ: My name is Veronica Ascarrunz
16	from the law firm of Wilson Sonsini Goodrich & Rosati
17	in Washington, D.C. I'm here representing the patent
18	owner. With me is my co-counsel from Foley &
19	Lardner, Natasha Iyer, also in Washington, D.C.
20	MR. MATHAS: Good morning. Kurt Mathas from
21	Winston & Strawn on behalf of the petitioner, Watson
22	Laboratories, Inc. and Dr. Donovan.
23	And joining me this morning are two
24	summer associates from our office, Jacob Wilbers and
25	Joe Anderson.

1	MAUREEN DONOVAN, Ph.D.
2	in that deposition?
3	A. No.
4	Q. And, as with your earlier deposition in
5	this matter, you understand that you are to answer my
6	questions truthfully; correct?
7	A. Correct. Yes.
8	Q. And, as before, please let me know if you
9	don't understand any of my questions; and if you
10	answer, I'll assume that you have understood; is that
11	fair?
12	A. That's fair.
13	Q. You understand that there are two
14	proceedings before the Patent the Patent and
15	Trademark Office regarding two separate patents;
16	correct?
17	A. Correct.
18	MS. ASCARRUNZ: Okay. And since those
19	weren't read into the caption at the beginning, just
20	for the record, those are case IPR No. 2017-01621 and
21	case IPR 2017-01622.
22	And, Kurt, as we did before, can we
23	agree that this transcript will be used in connection
24	with both of those proceedings.
25	MR. MATHAS: We agree.

Q.

A.

No.

24

25

Okay. Have you ever spoken with him?

1	MAUREEN DONOVAN, Ph.D.
2	Q. And you recall that there is a district
3	court litigation between the two parties concerning
4	the same patents; correct?
5	A. Yes, I do.
6	Q. And you were deposed in that proceeding
7	as well?
8	A. Yes, I was.
9	Q. Have you had the opportunity to review
10	your deposition from that proceeding recently?
11	A. Meaning relatively recently.
12	Q. Okay. Have you reviewed the patent owner
13	response filed in connection with these IPRs?
14	A. I reviewed something I recall being
15	titled a patent owner response. There are a number
16	of patent owner documents that I've seen that I
17	you know, if there's a specific question or
18	something, I don't remember which document is which,
19	but I think I've seen something titled "The Patent
20	Owner Response."
21	Q. Okay. And have you reviewed a
22	declaration from a Dr. Aaron Waxman in connection
23	with the two IPRs?
24	A. Not to my recollection.
25	Q. Have you reviewed a declaration from a

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21	info

### MAUREEN DONOVAN, Ph.D.

Dr. Richard Delvi (phonetic) in connection with the two declarations?

- A. Yes, I've reviewed that declaration.
- Q. Do you -- so there were two declarations by Dr. Delvi. I'm trying to understand which -- do you know if you've seen one or two of those declarations?
  - A. I'm not sure.
  - Q. Okay. Fair enough.

In the course of research in your professional capacity, do you regularly rely on research you perform in the European Union Community Register?

- A. I more typically rely on information that's available from the FDA being a U.S.-based organization. I'm certainly aware of the European Union and the EMA and their methodologies for drug approving, and so I would know to go look there if what I was looking for wasn't currently available as information at the FDA.
- Q. Okay. I know at the last deposition we covered a large volume of materials. I'm going to put some of those in front of you, not to sort of overwhelm you, but just so you have them in front of

22

23

24

1	MAUREEN DONOVAN, Ph.D.
2	you if you need to reference them at any point, and
3	you should be familiar with all of them so.
4	A. Okay.
5	MS. ASCARRUNZ: And, for the record, this
6	will be Exhibit 1001 from Proceeding 2017-01621,
7	which is U.S. Patent No. 9,358,240.
8	And then Exhibit 1001 from IPR
9	Proceeding 2017-01622. This one is U.S. Patent
10	No. 9,339,507.
11	And then Exhibit 1002 from IPR
12	Proceeding 2017-01621, titled "Expert Declaration of
13	Maureen D. Donovan Ph.D."
14	Exhibit 1002 from IPR proceeding
15	2017-01622, entitled "Expert Declaration of Maureen
16	D. Donovan Ph.D."
17	BY MS. ASCARRUNZ:
18	Q. So I just want to make sure at the
19	outset and you can take your time to glance
20	through them you're familiar with these four
21	documents; right?
22	A. I am, yes.
23	Q. And in your declarations, which are both
24	Exhibits 1002 there, you refer to combinations 1, 2,
25	and 3 for the 1240 natent: correct?

1	MAUREEN DONOVAN, Ph.D.
2	A. Yes.
3	Q. And in connection with the '507 patent
4	declaration you also rely on Combinations 1, 2, and
5	3?
6	A. Yes, I do.
7	Q. And in Combination 3 for each of the
8	proceedings you rely on what you called the EU
9	Community Register; right?
10	A. Yes.
11	Q. And in Combination 2 for each of the
12	proceedings you rely on what you called the
13	OptiNeb-ir user manual; right?
14	A. That's correct.
15	Q. And you're also an expert for Watson in
16	the district court proceeding between the parties
17	related to these same patents; correct?
18	A. Yes, that's correct.
19	Q. And in that proceeding you also offered
20	opinions that the patents at issue here, which are
21	Exhibits 1001 in front of you, are obvious; right?
22	A. Yes.
23	Q. And in that proceeding you also offered
24	opinions based on the OptiNeb device as prior art;
25	right?

1	MAUREEN DONOVAN, Ph.D.
2	A. I think and there's certainly
3	discussion in that expert report about the OptiNeb
4	device and some of the generations of OptiNeb.
5	Q. Okay. And in that proceeding you also
6	offered opinions based on the Venta-Neb device;
7	correct?
8	A. Yes, I did.
9	Q. And in your professional experience
LO	before you were engaged by Watson to opine on these
11	patents, you were not familiar with Ventavis;
L2	correct?
L3	A. Not distinctly, no.
L4	Q. And you were not familiar with OptiNeb;
L5	correct?
16	A. Again, it was one of a number of devices.
L7	I probably was aware of it, but I didn't have any
18	specific knowledge of it.
19	Q. Okay. And before these proceedings you
20	never came to be familiar with the features of the
21	OptiNeb devices; correct?
22	A. Not in detail.
23	Q. And you've never seen an OptiNeb or a
24	Venta-Neb device in person; correct?
25	A. Not to my recollection.

1	MAUREEN DONOVAN, Ph.D.
2	Q. And you were not familiar from a
3	professional standpoint with treprostinil before
4	these proceedings; correct?
5	A. Not in any specific research oriented
6	sense.
7	Q. And I think you mentioned earlier in
8	response to one of my questions.
9	You understand that there were
10	multiple generations of OptiNeb device; correct?
11	A. Yes, I do.
12	Q. And you understand that there the
13	multiple generations of the Venta-Neb device;
14	correct?
15	A. I guess I'm less familiar with the
16	generations of Venta-Neb device.
17	Q. Okay. And you don't have any specific
18	knowledge of whether the OptiNeb-ir was a single
19	device versus having multiple models that were termed
20	OptiNeb-ir; correct?
21	A. Again, I would would need some further
22	information to try to discern what what a brand
23	name covered at any given time.
24	Q. And without seeing that further
25	information, do you know in the course of your work

1	MAUREEN DONOVAN, Ph.D.
2	in this proceedings whether that is the case?
3	A. I'm sorry. Can you repeat the question?
4	Q. Sure. Let me rephrase it.
5	Without further information do you
6	have current knowledge of whether the OptiNeb-ir
7	device encompasses a single device or multiple
8	models?
9	A. Well, I think it comes down to what
10	you what what I might define as a model
11	difference and what the designer of that device might
12	determine to be a you know, a change in the
13	current model or what I might discern to be a simple
14	change in the current model that the a slight
15	change in the current model that the the
16	manufacturer decided to rename as a as a next
17	generation.
18	I think knowing what the changes
19	were from the device from from known change to
20	known change or discernable change to discernable
21	change, I think is somewhat up to the person
22	reviewing the change and the magnitude that that made
23	a difference.
24	So I'm I'm aware that the
25	Nebu-Tec company named their devices slightly

1	MAUREEN DONOVAN, Ph.D.	
2	differently. Each of those devices has different	
3	capabilities.	
4	What's really a model change or	
5	whatever, I I would need more information and	
6	probably a I I may or may not reserve my own	
7	opinion on whether that was really deserving of a	
8	model change or not.	
9	Q. Are you aware of model numbers used by	
10	Nebu-Tec in connection with the OptiNeb-ir	
11	designation?	
12	A. Not specific model numbers without, you	
13	know, some sort of context for reference.	
14	Q. Okay. You reviewed and relied to some	
15	extent on the prosecution histories for these two	
16	patents in connection with your opinions; correct?	
17	A. Yes, I did.	
18	Q. And you are aware that during prosecution	
19	of the patents the examiner considered the Chaudry	
20	reference you rely on; correct?	
21	A. Yes.	
22	Q. And you are aware that during prosecution	
23	of the patents the examiner considered the Venta-Neb	
24	device and Ventavis; correct?	
25	MR. MATHAS: Object to the form.	

1	MAUREEN DONOVAN, Ph.D.
2	BY THE WITNESS:
3	A. It's been quite awhile since I've
4	reviewed the file history. I I just I don't
5	remember.
6	BY MS. ASCARRUNZ:
7	Q. Okay. So is it fair to say you also
8	don't remember whether the examiner actually cited
9	this art against the applications during prosecution?
10	A. I guess I'd like to refer to the section
11	where the examiner made comments about that art to
12	refresh my memory.
13	Q. Okay. Did you take into consideration in
14	forming your opinions what the examiner stated in
15	connection with certain prior art references?
16	A. Oh, I certainly when I read the file
17	histories, I certainly take into account what the
18	examiner viewed, but the file histories represent a
19	relatively reasonably long period of time with
20	changes and so forth.
21	I there were other things
22	probably that the examiner had in front of them that
23	aren't necessarily directly part of the file history

so -- so, yeah, I certainly consider the comments of

the examiner, but they're performing a job in a way

24

1	MAUREEN DONOVAN, Ph.D.
2	that I'm unfamiliar with really what what the
3	progress of that evaluation is, so I can't always say
4	that at any given on any given page that what the
5	examiner was determining at the time stays with me or
6	really significantly informed my opinion.
7	Q. Okay. Are ultrasonic nebulizers
8	preferable to the air jet nebulizers?
9	A. They're a different type of nebulizer.
10	The ultrasonic nebulizer has its own
11	attributes that a jet nebulizer doesn't.
12	There are aspects of jet nebulizers
13	that are distinct to what ultrasonic nebulizers are
14	capable of.
15	So each one has some attributes,
16	each has drawbacks.
17	There are there would be reasons
18	why one would select an ultrasonic nebulizer. There
19	would be reasons now post or now that there are
20	availabilities of other types of nebulizers to select
21	those.
22	It's very much a a it's a
23	situational evaluation of whether one might be
24	considered better than the other for a particular
25	application

1

## MAUREEN DONOVAN, Ph.D.

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Q. And in 2006 were ultrasonic nebulizers preferable to air jet nebulizers?

A. Again, I don't think that anybody would ever in a generalizable fashion say that they were always preferable over jet nebulizers. They had specific attributes to them. Many -- the portability of ultrasonic nebulizers compared to the portability of many of the jet nebulizers was a significant attribute, and patients appreciated that.

So there are times where if one could use an ultrasonic nebulizer, you'd select that just because you knew that your patient population would like the opportunity to have something that's slightly smaller and more portable to carry with But that wouldn't always -- it doesn't mean that it's always better.

- Q. So based on your responses, is it fair to say that there would be times when jet nebulizers would be preferable over ultrasonic nebulizers under certain circumstances?
- You know, it varied dependent on the circumstance which -- how you'd evaluate which nebulizer to select based on what performance criteria you desired.

1	MAUREEN DONOVAN, Ph.D.
2	Q. But you're unwilling to say that
3	ultrasonic nebulizers in 2006 were universally
4	preferable to jet nebulizers?
5	A. I think there
6	MR. MATHAS: Object to the form.
7	BY THE WITNESS:
8	A. I think there may be under certain
9	criteria that nearly everybody would select a
10	ultrasonic nebulizer.
11	So if your criteria was based on
12	portability, for example, I think in 2006 probably
13	everybody would recognize that an ultrasonic
14	nebulizer was was slightly smaller and more
15	portable.
16	It also was subject to more
17	readily or it was more readily damaged by having
18	it be portable, so there were some even some
19	drawbacks with that.
20	But, you know, I don't think that
21	there was a lot of controversy on that portion of the
22	functionality.
23	But a number of the other aspects
24	and, again, costs and ability to or the resistance
25	to to mishap may have overweighed the portability

1	MAUREEN DONOVAN, Ph.D.
2	for a particular use.
3	Q. I'm sorry. What do you mean by
4	resistance to mishap?
5	A. Well, knocking it off of a table and not
6	have and having to immediately replace it because
7	it no longer worked.
8	Q. In addition to portability, are there
9	other considerations that would inform the selection
10	of a jet versus ultrasonic nebulizer?
11	A. I mean certainly there are other
12	considerations, but we very quickly get into
13	considering you need to know something about
14	the why you're either considering comparing those
15	two, what what is your intended purpose, what are
16	your what are your goals for comparing them.
17	So it's really hard just in the
18	abstract to to say, well it's easy in the
19	abstract to say, yes, you would compare them, but how
20	you would compare them outside of a specific reason
21	for comparing them is very difficult to do.
22	Q. Okay. Nevertheless I'm going to ask you
23	some questions
24	A. Okay.
25	Q trying to compare them.

1	MAUREEN DONOVAN, Ph.D.
2	Do ultrasonic nebulizers and air jet
3	nebulizers differ in connection with considering
4	output rate?
5	MR. MATHAS: Object to the form.
6	BY THE WITNESS:
7	A. Well, they have different design
8	specifications, and so in the world of jet nebulizers
9	there's probably a range of outputs. It may be very
10	different if you that range may be narrowed for
11	pharmaceutical nebulizers compared to other reasons
12	you'd use a jet compressed air what was what is
13	essentially a nebulizer.
14	Same thing for ultrasonic
15	nebulizers. So if you actually reask the
16	question, and let me see if I can get to a more a
17	more defined answer.
18	Q. Sure.
19	So the question was: Do ultrasonic
20	nebulizers and air jet nebulizers differ in
21	connection with considering output rate?
22	MR. MATHAS: Same objection.
23	BY THE WITNESS:
24	A. Yeah, again, I it's so dependent on
25	their the design of the actual system and the

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- 1		
4		

# MAUREEN DONOVAN, Ph.D.

Are there differences in how ultrasonic

2

intended purpose for designing the system that they're pretty broad ranges that cover both of them

4

3

regarding output rates.

5

### BY MS. ASCARRUNZ:

6 7

nebulizers and air jet nebulizers affect particle

8

size?

9

Well, they accomplish forming particles Α. or droplets in different ways, so they -- like --

10

11 they -- as far as nebulizers and ultrasonic -- or as

12

far as jet nebulizers and ultrasonic nebulizers used

13

for pulmonary inhalation, there's a particular size

14

range that is oftentimes a goal to achieve, and so

15 16

intentionally designed to maximize the droplet size

the -- those pieces of -- or those devices are

17

in the range that's deemed to be beneficial for

forth around those is somewhat dependant on the

the droplets, so, therefore, there are different

characteristics of those droplet particle size

18

pulmonary delivery.

19

dist -- particle size distribution looks like and so

Whether they -- what the -- what the

21

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actual type of nebulizer and how it was designed, so

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they -- they -- they differ in how each of them forms

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### MAUREEN DONOVAN, Ph.D.

distributions that's observed between them.

- Q. Are you aware of any difficulties ultrasonic nebulizers face in aerosolizing certain types of formulations?
- A. Yes, I am aware of situations where it would be less likely for the particle size -- the desired particle size or droplet size to be emitted from an ultrasonic nebulizer. Similar to there are different -- there are other situations where fluids used in jet nebulizers that I would anticipate they would have -- they would be more challenging potentially to be able to develop into the desired particle size range from -- for a pharmaceutical use.
- Q. Are you aware of any situations with those challenges that are specific to ultrasonic nebulizers versus jet nebulizers?
- A. I've been aware of them at times because I lecture on the differences. I just can't bring to mind what the specific differences are at this moment.
- Q. Okay. In your opinion is pulse nebulization preferable to continuous nebulization?
- A. Again, it depends on the use. It depends on the user. In -- I think in many situations the --

1	MAUREEN DONOVAN, Ph.D.
2	the ability not to have a a wasting of the aerosol
3	being continuously produced to the environment or
4	needing to add additional tubing or aspects to the
5	device to capture that and redirect it back to the
6	the the filled volume for nebulization is is
7	certainly of benefit.
8	So you need you need to do more
9	things to capture an aerosol. So if you than if
10	you didn't have that aerosol being formed
11	continuously.
12	So there are certainly there are
13	certainly advantages both from a a device and
14	environmental standpoint for having a a device
15	that emits the desired aerosol when when you want
16	it to and doesn't emit it when you're not able to use
17	it.
18	Q. And in your opinion in it's your
19	opinion that continuous nebulization is never
20	preferable to pulsed nebulization; correct?
21	MR. MATHAS: Object to form.
22	BY THE WITNESS:
23	A. Yeah, I don't think it was never
24	preferable.
25	

1	MAUREEN DONOVAN, Ph.D.
2	BY MS. ASCARRUNZ:
3	Q. In your opinion having a patient
4	coordinate its breathing to the output and timing of
5	a device is preferable to breath-actuated devices;
6	right?
7	A. I don't know that I've ever expressed
8	that opinion either, that there are virtues of
9	both. The design aspects of one are different than
10	the design aspects of the other, so they certainly
11	contribute to cost and so forth, but being able to
12	assure that the patient for a nebulizer, for
13	example, being able to assure that the patient
14	inhales the medication when the device is delivering
15	the medication is the essential portion.
16	MS. ASCARRUNZ: Okay. I'm going to hand you
17	another exhibit. And, for the record, this is
18	Exhibit No. 1006 in both proceedings.
19	BY MS. ASCARRUNZ:
20	Q. And I see you're flipping through it, so
21	I'll give you my question so you can keep it in mind
22	when you flip.
23	Do you recognize this exhibit?
24	A. Yes, I do.
25	Q. What is it?

1	MAUREEN DONOVAN, Ph.D.
2	A. This is a I believe this is a
3	translation yes. This is a translation of the
4	OptiNeb-ir operating instructions.
5	Q. Is this the reference you rely on for
6	your Combination 2 as the OptiNeb-ir user manual?
7	A. Yes, it is.
8	Q. Did you locate this reference, or was it
9	provided to you by counsel?
10	A. The the translation was provided to me
11	by counsel.
12	Q. And was the original German version
13	located by you, or was it provided to you by counsel?
14	A. That was also provided by counsel.
15	Q. You offer opinions about what this manual
16	teaches a POSA; correct?
17	A. Yes, I do.
18	Q. So I understand that, but my question
19	and my question is going to be are but you're not
20	offering an expert opinion that this exhibit
21	qualifies as prior art under the law; correct?
22	A. I don't know that I'm able to make that
23	determination, but I am aware that that this
24	device was available at the time that we're speaking,
2.5	usually 2004 2006 type dating, and so the device

1	MAUREEN DONOVAN, Ph.D.
2	was the device the OptiNeb device was being
3	used. I know that the Nebu-Tec company was selling
4	that device, was interested in having pharmaceutical
5	companies and individuals use their devices; and so
6	being able to obtain the user manual for a device
7	that was commercially for sale, whether it was
8	whether I accessed it, whether somebody accessed it,
9	I didn't look for it in 2004, but it would have been
10	easily obtainable.
11	MS. ASCARRUNZ: Okay. That wasn't my
12	question.
13	And I move to strike it as not
14	responsive.
15	BY MS. ASCARRUNZ:
16	Q. Dr. Donovan, in your declarations do you
17	offer an expert opinion that the OptiNeb user manual
18	meetings the legal requirements of public
19	accessibility?
20	A. Well, in my opinion on Page or
21	Paragraph 55 I believe
22	Q. Which document are you looking at?
23	A. Oh, I'm sorry. I'm looking at my expert
24	declaration in the '507 case.
25	So in Paragraph 55 I describe how

1	MAUREEN DONOVAN, Ph.D.
2	the the OptiNeb device is described in an abstract
3	available publicly in the fall of 2000 and was
4	presented in the fall of 2004 by a group of
5	investigators, and then later in Paragraph 61 I
6	describe that the OptiNeb device was detailed on the
7	Nebu-Tec website by at least 2003 referring to a
8	probably the same exhibit, different exhibit number,
9	and I use the information provided to me by other
10	witnesses who are able to assure that that
11	information was available in that website in 2003.
12	Q. So your answer to the question I asked
13	is, yes, in your declarations you offer an expert
14	opinion that the OptiNeb user manual meets the legal
15	requirements of public accessibility?
16	MR. MATHAS: Object to the form.
17	BY THE WITNESS:
18	A. I mean there are there are
19	descriptions in my expert declaration that state that
20	the OptiNeb information about the OptiNeb device
21	was available in 2004.
22	BY MS. ASCARRUNZ:
23	Q. So I'm not asking about the OptiNeb
24	device. I'm asking about the OptiNeb user manual.
25	A. And my

1	MAUREEN DONOVAN, Ph.D.
2	MR. MATHAS: Object to the form. There's no
3	question pending.
4	BY MS. ASCARRUNZ:
5	Q. So my question is, and was, for the third
6	time: In your declarations you offer an expert
7	opinion that the OptiNeb user manual meets the legal
8	requirements of public accessibility; correct?
9	MR. MATHAS: Object to the form.
10	BY THE WITNESS:
11	A. Again, I'm I'm not in a position to be
12	able to discern whether it meets the legal
13	requirements or not.
14	In my experience the I understand
15	that the OptiNeb device was being used by
16	investigators in 2004. There were user manuals
17	associated with all of those devices as they were
18	provided by the company.
19	And Nebu-Tec was interested in in
20	providing their device for use, so being able to
21	obtain the user manual would have been a simple
22	activity requiring communication either with an
23	investigator who was using it or the company who was
24	supplying it.
25	I have provided a copy of the user

1	MAUREEN DONOVAN, Ph.D.
2	manual that was that was available on their
3	website in 2004. I wasn't the one who obtained that
4	from the website in 2004.
5	BY MS. ASCARRUNZ:
6	Q. Dr. Donovan, you are aware that there
7	were multiple devices that were termed OptiNebs;
8	correct?
9	A. Yeah, as they as a parent name, yes.
10	Q. And not all OptiNebs were pulsed
11	nebulizers; correct?
12	A. Not all of the OptiNebs were only
13	well, it's my recollection that the very earliest of
14	OptiNeb devices was programmed to be a continuous
15	delivery, but it could be operated in a pulsed
16	fashion by by sort of a user interface if needed.
17	Q. And that's because it's your opinion that
18	in a continuous device where the user can turn it on
19	and turn it off, that is being used in a pulsed
20	manner; correct?
21	A. That gives a pulsed dose, yes.
22	Q. You point to the manual or yeah, the
23	user manual, Exhibit 1006, as demonstrating six
24	different programs; right?
25	A. Yes, I do.

1	MAUREEN DONOVAN, Ph.D.
2	Q. And the manual has very detailed
3	information on the proper use and capabilities of
4	those programs; right?
5	MR. MATHAS: Object to form.
6	BY THE WITNESS:
7	A. Well, it contains information about the
8	different programs.
9	In a user manual it is written such
10	that for the general user who doesn't have a
11	scientific training or a training in device design or
12	whatever that there are things that the user should
13	be dissuaded from doing.
14	And so the instructions in a user
15	manual don't necessarily limit a person with more
16	experience from using that information and applying
17	it in a different way than what what the
18	manufacturer wants the users to use how they want
19	the users to use them because that was the design,
20	and used inappropriately the manufacturer doesn't
21	have they they don't want to have the
22	responsibility for an undesired effect when somebody
23	used their device inappropriately.
24	BY MS. ASCARRUNZ:
25	Q. The question I asked was: The manual has

1	MAUREEN DONOVAN, Ph.D.
2	detailed information on the proper use of those
3	programs; correct?
4	MR. MATHAS: Object to the form. That's not
5	precise question you asked.
6	BY THE WITNESS:
7	A. Well, the user manual contains
8	descriptions, as they call them, and features of
9	those programs.
10	That's the terminology being used in
11	that section.
12	BY MS. ASCARRUNZ:
13	Q. Okay. Great. Thank you.
14	And the manual explains how those
15	features can be implemented; right?
16	A. In a general sense, yes, they're trying
17	to communicate what the features of those programs
18	are and what their initial design or maybe not
19	even initial, but under the the limitations of a
20	user manual what how those features describe how
21	the OptiNeb-ir is used or can be configured for that
22	particular user.
23	MS. ASCARRUNZ: Okay. The next few questions
24	I'm going to ask relate only to your declaration in
25	connection with the '240 patent.

1	MAUREEN DONOVAN, Ph.D.
2	MR. MATHAS: And, Veronica, you said the next
3	few. Will you indicate when you are moving back to
4	general questions.
5	MS. ASCARRUNZ: I will, yes.
6	MR. MATHAS: Thank you.
7	BY MS. ASCARRUNZ:
8	Q. And, in particular, so you know where I'm
9	looking, I'm particularly focused on the discussion
10	starting at Page 69 of that declaration entitled,
11	"Combination 2" and the paragraphs that follow from
12	that in that entire section.
13	A. Okay.
14	Q. So my question is: You are not relying
15	on the OptiNeb-ir user manual for the additional
16	limitations in Claims 2 well, let's do it one by
17	one in Claim 2; correct?
18	A. Well, Claim 2 of the '240 patent reads:
19	"The method of Claim 1, wherein the formulation
20	comprises 600 micrograms per mil of the treprostinil
21	or its pharmaceutically acceptable salt thereof.
22	And so Claim 2 refers back to
23	Claim 1 as a dependent claim, and I believe in
24	Claim 1 I am relying on the OptiNeb-ir user manual.
25	Well

1	MAUREEN DONOVAN, Ph.D.
2	Q. Sure. I under
3	A. Yes.
4	Q. Are you done?
5	A. So so in my opinion about Claim 2,
6	since Claim 2 relies or is dependent on Claim 1,
7	the things I relied on for Claim 1 also would be
8	relied opinion for Claim 2.
9	Q. Okay. Certainly. I understand that.
10	And that would be the case for all
11	of the dependent claims as well; right, Claims 2
12	through 9?
13	A. Yes.
14	Q. Okay. The question I asked, and just to
15	highlight the specific word that makes it a little
16	bit different than the question you answered.
17	I asked whether you are relying on
18	the OptiNeb-ir user manual for the additional
19	limitation in Claim 2?
20	A. And so
21	Q. Understanding, of course, that you are
22	relying on what's brought in from independent
23	Claim 1?
24	A. Okay. So the limitation regarding the
25	specific concentration of treprostinil or its

1	MAUREEN DONOVAN, Ph.D.
2	pharmaceutically acceptable salt?
3	Q. Yes. The 600 microgram per mil.
4	A. Okay. And, no, I'm not relying the
5	OptiNeb-ir user manual to describe the 600 microgram
6	per mil concentration of treprostinil.
7	Q. Okay. And are you relying on the
8	OptiNeb-ir user manual for the additional limitation
9	in claims in Claim 7?
10	A. The so I the additional limitation
11	I assume that or I understand you to mean is the
12	single event dose is inhaled at 3 to 18 breaths by
13	the human.
14	And the OptiNeb-ir user manual
15	allows for a variety of numbers of breaths that a
16	user would be able to to use as a single event
17	dose, so a whatever the or the OptiNeb-ir user
18	manual doesn't direct that specific subset but that
19	specific subset is certainly within all of the
20	information encompassed in the OptiNeb-ir user manual
21	regarding the use of of the OptiNeb-ir nebulizer.
22	Now, the one thing to note about
23	this particular user manual is it's directed at using
24	the OptiNeb-ir for ventilation, so it's it has

some additional information about how to -- how to

1	MAUREEN DONOVAN, Ph.D.
2	set up the ventilators and so forth.
3	So it's less likely that this
4	version would speak to specific numbers of breaths,
5	but a similar user manual for the same nebulizer used
6	for for non-ventilation purposes would, again,
7	leave open the possibility to however many breaths a
8	user and their physician or or someone who was
9	directing them how to use that.
10	3 to 18 is just a subset of the
11	possibilities.
12	Q. Nowhere in your declaration do you
13	address the limitation of Claim 7 in connection with
14	the OptiNeb-ir user manual; correct?
15	MR. MATHAS: Object to the form.
16	THE WITNESS: Can you restate that question,
17	please?
18	BY MS. ASCARRUNZ:
19	Q. Nowhere in your declaration do you
20	address the additional limitation of Claim 7 in
21	connection with the OptiNeb-ir user manual; correct?
22	MR. MATHAS: Same objection.
23	BY THE WITNESS:
24	A. Well, in Paragraph 80 where I'm talking
25	about the additional limitations of Claims 2, 7, and

1	MAUREEN DONOVAN, Ph.D.
2	8, that paragraph describes that Voswinckel is
3	sufficient to teach that, and a POSA would understand
4	that the OptiNeb device is certainly capable of
5	meeting the description of the number of breaths in
6	that claim.
7	MR. MATHAS: Dr. Donovan, I believe in your
8	answer you said Paragraph 80, but I believe you might
9	be looking at something different.
10	THE WITNESS: Oh, I did. I was looking at
11	Paragraph 180. Sorry if I misspoke.
12	BY MS. ASCARRUNZ:
13	Q. Nowhere in your declaration do you
14	express what you just stated.
15	That a POSA would understand the
16	OptiNeb device is certainly capable of meeting the
17	description of the number of breaths in that claim;
18	correct?
19	A. My my declaration does not contain
20	that explicit statement, and there I don't speak
21	directly to what a POSA would recognize regarding the
22	OptiNeb-ir device being able to be configured so that
23	an individual could breathe take 18 breaths or
24	however many breaths was desired from that from

that nebulizer, but it was well-known that nebulizers

1	MAUREEN DONOVAN, Ph.D.
2	are designed to be used with a variety of different
3	breath numbers.
4	MS. ASCARRUNZ: I move to strike the latter
5	part of that answer as not responsive.
6	BY MS. ASCARRUNZ:
7	Q. Dr. Donovan, in connection with dependent
8	Claim 8, nowhere in your declaration do you express
9	an opinion that the OptiNeb-ir user manual discloses
10	the additional limitation of dependent Claim 8;
11	correct?
12	A. Again, in a similar manner in Paragraph
13	180 I describe how in the context of using
14	Voswinckel, Patton, and Opti-Neb the OptiNeb-ir
15	user manual, that Voswinckel sufficiently describes
16	Claim 8, yet a POSA would understand that the
17	OptiNeb-ir, based on the user manual, just based on
18	an understanding of nebulizers, was able to be used
19	with a variety of different breath numbers.
20	MS. ASCARRUNZ: I, again, move to the strike
21	the latter part of that answer as not responsive.
22	BY MS. ASCARRUNZ:
23	Q. Dr. Donovan, you've referred to Paragraph
24	180 a few times now, and in its entirety it states:
25	"As explained in connection with Combination 1

1	MAUREEN DONOVAN, Ph.D.
2	Voswinckel alone teaches the required additional
3	limitations of Claims 2, 7, and 8"; correct?
4	A. That's what it states, yes.
5	Q. It doesn't say anything there about a
6	POSA and the OptiNeb-ir user manual; correct?
7	A. That that paragraph does not
8	explicitly have words including statements about the
9	OptiNeb-ir user manual, yet the entire description is
10	under the subheading of being using the
11	combination of Voswinckel, Patton, and the OptiNeb-ir
12	user manual.
13	Q. Okay. And in the entire subheading
14	of the Subsection B, including Paragraphs 180,
15	181, 182, you don't mention the OptiNeb-ir user
16	manual in any of those paragraphs; correct?
17	A. I do not mention the OptiNeb-ir user
18	manual specifically in any of those numbered
19	paragraphs, yet in the context of Point B where the
20	combination makes those obvious, the POSA certainly
21	has a knowledge of the OptiNeb-ir user manual in that
22	evaluation.
23	Q. So since a POSA has knowledge of the
24	OptiNeb-ir user manual in the evaluation of dependent
25	Claims 2. 7. and 8. it is your opinion that a POSA

1	MAUREEN DONOVAN, Ph.D.
2	would consider the OptiNeb-ir user manual in
3	assessing what you call Combination 2; correct?
4	MR. MATHAS: Object to the form.
5	BY THE WITNESS:
6	A. Well, again, as I stated before, the
7	the POSA would certainly be well aware that the
8	OptiNeb-ir, based on the user manual, or based on
9	just knowledge of nebulizers and ultrasonic
10	nebulizers, that that those nebulizers are
11	designed to be used to to deliver multiple doses,
12	multiple breaths; and so that any of the
13	statements regarding the dependent claims are made in
14	context with that. It's in perfect keeping with what
15	a POSA understands about an ultrasonic nebulizer and
16	the OptiNeb-ir nebulizer in particular.
17	BY MS. ASCARRUNZ:
18	Q. Let me direct your attention to
19	Paragraph 170.
20	A. 170?
21	Q. Yes.
22	A. In my '240 declaration?
23	Q. Correct.
24	A. Right.
25	Q. In there you state that: "The preamble

1	MAUREEN DONOVAN, Ph.D.
2	and Limitations A, B, B1, and C" of Claim 1
3	"would have been obvious over Voswinckel in view of
4	Patton"; correct?
5	A. That's what it states, yes.
6	Q. And in the following paragraph you
7	indicate that you have been asked to alternately
8	consider whether Limitation D would have been obvious
9	in reference to the OptiNeb-ir user manual in place
10	of Ghofrani; correct?
11	A. That's what it states.
12	Q. And you continue that you explain below
13	that the Limitation D would have been obvious over
14	Voswinckel in view of Patton and the OptiNeb-ir user
15	manual; correct?
16	A. That's what it states.
17	Q. That paragraph does not purport to state
18	that you were asked to consider whether anything
19	other than Limitation D would have been obvious in
20	view of the OptiNeb-ir user manual; correct?
21	A. Well, Paragraph 171 describes a specific
22	aspect that I was asked to consider, but it doesn't
23	mean that there was a lack of consideration of the

OptiNeb-ir capabilities with reflection to the rest

of this specific claim or the other claims presented.

24

As -- as -- as a POSA the -- the claims have to -- I have to be -- well, the -- the claims descriptions themselves and specific pieces of art that I -- I use to describe what was known in the art doesn't mean that I've evacuated my brain from consideration of anything else during that particular evaluation, so, again, in 171 I was certainly asked to consider this directly, but it doesn't mean I was absent of consideration or thought about the OptiNeb-ir during the rest of my evaluation of the '240 or the '507 patent claims.

Q. Okay. So I'm not asking what is in your brain. I'm asking what did you express to the Patent Board, and my question is -- well, are you saying then that you have considered certain things in forming your opinion that are not expressed in this declaration?

MR. MATHAS: Object to the form.

#### BY THE WITNESS:

A. That's not specifically what I'm saying.

I mean there's many things that I -- I have thought regarding these claims and so forth, not all of which are recorded because it's -- it would be impossible to do that; but in the case of Paragraph 171, that

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# MAUREEN DONOVAN, Ph.D.

was a succinct description of a particular combination of pieces of art that I used to -- to evaluate Claim 1 of the 240 patent, and that was -- to make that statement that is -- that -- even though I was aware of other art, those pieces of art were sufficient to describe the art known regarding Claim 1.

9 BY MS. ASCARRUNZ:

- Q. Okay. And in this section talking about Claim 1 of the '240 patent in connection with Combination 2, the only subsection is in connection with Limitation D; correct?
- A. As -- as this -- as I designed this report, yes, in this particular section I simply highlighted the difference regarding the limitation -- limitation -- or the Limitation D of Claim 1, yet all of the description previously in the report regarding Claim 1 and some of the other references -- or the other art that was evaluated is part of -- is part of this discussion, too. It's already been -- but it's already been described, so it wasn't repeated.
- Q. Okay. So my question is only about the OptiNeb-ir user manual.

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1	MAUREEN DONOVAN, Ph.D.
2	In your report do you express a
3	specific opinion that the OptiNeb-ir user manual
4	teaches any limitation of Claim 1 that is not
5	Limitation D?
6	A. Can you reask the question?
7	Q. Yes.
8	In your report do you express a
9	specific opinion that the OptiNeb-ir user manual
10	teaches any limitation of Claim 1 that is not
11	Limitation D?
12	And, I'm sorry. Let me rephrase
13	that because I said report instead of declaration.
14	In your declaration do you express a
15	specific opinion that the OptiNeb-ir user manual
16	teaches any limitation of Claim 1 that is not
17	Limitation D?
18	A. Well, I certainly don't remember every
19	instance of my descriptions of the OptiNeb user
20	manual throughout my declaration, so I could go back
21	and look for all of those, but in keeping with this
22	particular Combination 2, my my approach is that
23	the combi the combination of Voswinckel, Patton,
24	and the OptiNeb user manual make are all those

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pieces of prior art make Claim 1 obvious.

	rage 45
1	MAUREEN DONOVAN, Ph.D.
2	Now, I specifically made a point
3	about Limitation D and the relationship to what one
4	would learn from the OptiNeb-ir user manual for
5	Limitation D, but it's this section, again, speaks
6	to the combination of those references, so whether
7	explicitly stated or not, that combination of
8	references is being evaluated in terms of these
9	claims.
10	Q. So you're saying you implicitly
11	considered the OptiNeb-ir user manual in connection
12	with Limitations A, B, B1, and C?
13	MR. MATHAS: Object to the form.
14	BY THE WITNESS:
15	A. Well, I'm saying as a POSA I know what
16	the information is in the OptiNeb-ir user manual, and
17	it's nearly impossible for me to not have that be
18	the be contextual information regarding my
19	opinions, and how I have stated information in this
20	expert declaration of how I've arrived at using
21	specific pieces of art in combinations to arrive at
22	those opinions.
23	RV MS ASCARRIINZ:

Q. You said that in this section you

specifically made a point about Limitation D.

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MAUREEN	DONOVAN.	Ph. D	ò

In this section you did not pecifically make a point about Limitations A, B, B1, nd C in connection with the OptiNeb-ir user manual; orrect?

- A. Not specifically in this section; but, again, this section is a subsection of Point No. 2, which is speaking to the combination of Voswinckel in view of Patton and the OptiNeb-ir user manual.
- Q. Okay. And where in Section 2 where you discuss Combination 2 do you address Limitations A, B, B1, and C?
- A. Okay. Again, in -- in an effort to keep the number of pages to -- or the -- or the succinctness of this report that A, B -- oh, let me use the letters -- let me see if I can -- A, B, B1, and C and my evaluation of A, B, B1, and C regarding their obviousness specifically with Voswinckel and Patton as pieces of prior art was described completely in Combination 1, and it's still the same description. I just didn't cut and paste that entire description and put it in Combination 2.
- Q. Okay. And the OptiNeb-ir user manual is not a component of Combination 1; correct?
  - A. That's correct. The OptiNeb user -- ir

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1	MAUREEN DONOVAN, Ph.D.
2	user manual is is not a specific piece of prior
3	art that was used in my evaluation of Combination 1.
4	MS. ASCARRUNZ: We've been going for a little
5	over well, a bit over an hour, so this is a good
6	time to break if you'd like one.
7	THE WITNESS: Sure.
8	THE VIDEOGRAPHER: Going off the record at
9	10:49 a.m.
10	(WHEREUPON, a recess was
11	had.)
12	THE VIDEOGRAPHER: Going on the record. This
13	marks the beginning of Media No. 2.
14	The time is now 11:07 a.m.
15	BY MS. ASCARRUNZ:
16	Q. Okay. Dr. Donovan, I promised I would
17	tell you when we stopped talking about '240
18	declaration, and now we're going to talk about just
19	the '507 declaration.
20	A. Okay. I'll switch.
21	Q. And if it's helpful to you, I'm looking
22	at Paragraph 182 and 183; but, of course, you're free
23	to look wherever you need to to answer my questions.
24	A. Okay.
25	Q. So in connection with this '507

1	MAUREEN DONOVAN, Ph.D.
2	declaration, you are relying on the OptiNeb-ir user
3	manual for Limitations B and C; correct?
4	A. I'm going to try to get my bearings on
5	where I am first.
6	Q. Sure. Take as long as you need to
7	answer.
8	A. Okay. Can you state the question,
9	please?
10	Q. Sure.
11	In connection with this '507
12	declaration, you are relying on the OptiNeb-ir user
13	manual as disclosing or making obvious Limitations B
14	and C; correct?
15	MR. MATHAS: Object to the form.
16	BY THE WITNESS:
17	A. Well, again, the the prior paragraphs
18	describe some of the considerations of the OptiNeb
19	and of the user manual in my considerations, so in
20	Paragraph 182, while it may not be explicitly stated,
21	and certainly Limitations A and D could have been
22	evaluated and found to be obvious with just
23	Voswinckel and Chaudry, again, there's this is
24	Voswinckel, Chaudry, Patton, and OptiNeb-ir is the
25	combination that's being described in this section.

1	MAUREEN DONOVAN, Ph.D.
2	Q. My question again is: In connection with
3	this '507 declaration, you are relying on the
4	OptiNeb-ir user manual as disclosing or making
5	obvious Limitations B and C; correct?
6	MR. MATHAS: Object to the form.
7	BY THE WITNESS:
8	A. Well, in Paragraph 183 I certainly state
9	that in specific reference to the OptiNeb-ir user
10	manual regarding Limitations B and C, that it's
11	that B and C are are obvious over Voswinckel in
12	view of Chaudry, Patton, and the OptiNeb-ir user
13	manual.
14	BY MS. ASCARRUNZ:
15	Q. So, yes, in connection with the '507
16	patent, you are relying on the OptiNeb-ir user manual
17	as making obvious Limitations B and C; correct?
18	A. And, again, as I stated before, this
19	entire section is about the combination of

A. And, again, as I stated before, this entire section is about the combination of Voswinckel, Chaudry, Patton, and the OptiNeb user manual; and in Paragraph 183 I explicitly state that the OptiNeb user manual contributes to concluding that the Limitations B and C are obvious.

Q. Okay. Fair enough.

So in connection with the

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MAUREEN DONOVAN, PII.	MAUREEN	DONOVAN,	Ph.D.
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'507 patent, you rely on the OptiNeb-ir user manual as making -- strike that. Start over.

In connection with the '507 patent, it is your opinion that Limitations B and C are obvious over Voswinckel in view of Chaudry, Patton, and the OptiNeb-ir user manual; correct?

- A. Can you ask that again, please?
- Q. In connection with the '507 patent, it is your opinion that Limitations B and C are obvious over Voswinckel in view of Chaudry, Patton, and the OptiNeb-ir user manual; correct?
- A. Yes, as stated in the last sentence of Paragraph 183.
- Q. You do not rely on the OptiNeb-ir user manual as making obvious or teaching Limitations A and D; correct?
- A. Again, in Paragraph 182 I specifically point to the Limitations A and D were obvious simply looking at Voswinckel and Chaudry; but, again, the combination being described in this section is Voswinckel, Chaudry, Patton, and the OptiNeb-ir user manual, and -- and their -- that -- and it's the combination of information, while explicitly A and D could be viewed as obvious, only if one chose to only

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## MAUREEN DONOVAN, Ph.D.

look at Voswinckel and Chaudry.

Q. So are you saying that you do rely on the OptiNeb-ir user manual as making obvious or teaching Limitations A and D?

A. No. What I'm saying is that, again, this -- the combination being described in this section is Voswinckel, Chaudry, Patton, and the OptiNeb-ir user manual and how that combination makes Claims 1 through 9 obvious.

But specifically in Paragraph 182 if one wanted to take a limited subset of that combination, which there's no reason one would have to, that simply Voswinckel and Chaudry are sufficient to demonstrate that Sections A and D of Claim 1 are obvious.

- Q. In your declaration do you rely on the OptiNeb-ir user manual as making obvious or teaching Limitation A?
- A. Because I use the OptiNeb-ir user manual in combination with the other references described in Combination 2 to describe Claims 1 through 9 as being invalid as obvious, there -- it's -- a knowledge of the OptiNeb-ir user manual can contribute to the evaluation of Limitations A and D, but I specifically

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used Voswinckel and Chaudry as examples of sufficient

art to demonstrate that those two limitations of

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rely on the OptiNeb-ir user manual as making obvious or teaching Limitation A --

question of whether or not in your declaration do you

Dr. Donovan, are you able to answer my

MR. MATHAS: Objection.

### BY MS. ASCARRUNZ:

Claim 1 are obvious.

Q. -- in your declaration?

MR. MATHAS: Object to the form. It's been asked and answered many times.

#### BY THE WITNESS:

While in Paragraph 182 of my declaration Α. I don't specifically include the OptiNeb-ir user manual, in that description it's the -- that section is a subsection of the Combination 2 section, which uses Voswinckel, Chaudry, Patton, and the OptiNeb-ir user manual; and there are times where various subsets of those four are sufficient to demonstrate obviousness, but I'm not limiting my evaluation to subsets of those four as I evaluated the obviousness based on that combination.

1	MAUREEN DONOVAN, Ph.D.
2	BY MS. ASCARRUNZ:
3	Q. So, yes, in your declaration you do rely
4	on the OptiNeb-ir user manual as making obvious or
5	teaching Limitation A?
6	MR. MATHAS: Object to the form.
7	BY THE WITNESS:
8	A. Again, I use Voswinckel in view of
9	Chaudry, Patton, and the OptiNeb user manual as
10	Combination 2 to for my opinion that Claims 1
11	through 9 are invalid.
12	The and that Voswinckel and
13	Chaudry alone are sufficient to evaluate Limitations
14	A and D of Claim 1 as being obvious, but one wouldn't
15	necessarily need to select a subset of those five
16	one, two, three, four pieces of art that were are
17	being used in combination.
18	BY MS. ASCARRUNZ:
19	Q. Dr. Donovan, in your declaration on the
20	'507 patent do you rely on the OptiNeb-ir user manual
21	as teaching or making obvious Limitation D?
22	A. The OptiNeb-ir user manual is considered
23	along with Voswinckel, Chaudry, and Patton to
24	evaluate Claims 1 through 9, and my opinion is that
25	those are those claims are obvious over those

1	MAUREEN DONOVAN, Ph.D.
2	references; and Limitation D can be obvious in view
3	of Voswinckel and Chaudry; and I would need to spend
4	a few moments thinking about whether there would be a
5	subset of of these four references using the
6	OptiNeb-ir user manual that I would want to add as an
7	addition in that paragraph; but I didn't see the need
8	to do that.
9	Q. Do you rely on the OptiNeb-ir user manual
10	in connection with the '507 patent strike that.
11	In your declaration concerning the
12	'507 patent, do you rely on the OptiNeb-ir user
13	manual as disclosing or making obvious any of the
14	additional limitations of the dependent claims?
15	A. I I don't think I understand your
16	question. In fact, I know I don't understand your
17	question.
18	Q. Is there a particular part of it that was
19	confusing?
20	A. Yes. If you would repeat the question, I
21	will tell you what's confusing to me.
22	Q. In your declaration concerning the '507
23	patent, do you rely on the OptiNeb-ir user manual as
24	disclosing or making obvious any of the additional

limitations of the dependent claims?

1	MAUREEN DONOVAN, Ph.D.	
2	A. And and it's in the terminology of the	
3	additional limitations of the dependent claims that	
4	I'm not sure what you're what you're specifically	
5	asking about.	
6	Q. Okay. Let's pin that down.	
7	So you understand that there are	
8	dependent Claims 2 through 9 in the '507 patent;	
9	correct?	
10	A. Yes, I understand that.	
11	Q. And I think we both understand that those	
12	dependent claims encompass and incorporate the	
13	limitations of Claim 1; correct?	
14	A. Yes.	
15	Q. Okay. So setting aside those limitations	
16	that are incorporated by reference to Claim 1, there	
17	are additional limitations specified in each of	
18	Claims 2 through 9; correct?	
19	A. Yes, that's my understanding.	
20	Q. And are those additional limitations in	
21	dependent Claims 2 through 9 taught or rendered	
22	obvious by the OptiNeb-ir user manual in your	
23	declaration?	
24	MR. MATHAS: Object to the form.	
25	MS. ASCARRUNZ: That's a good objection.	

1	MAUREEN DONOVAN, Ph.D.
2	Let me rephrase that.
3	BY MS. ASCARRUNZ:
4	Q. In your declaration do you express an
5	opinion that those additional limitations in
6	dependent Claims 2 through 9 are taught or rendered
7	obvious by the OptiNeb-ir user manual?
8	MR. MATHAS: Object to the form.
9	BY THE WITNESS:
10	A. Well, throughout Paragraphs and what
11	I'm looking at is Paragraphs 205 through 212 where
12	there's specific description of Claims 2 through 9
13	and a bit of additional information about Claim 5 and
14	Claim 6.
15	All of them indicate that I have
16	my opinion is that those claims would have been
17	obvious over Voswinckel in view of Chaudry, Patton,
18	and the OptiNeb user manual.
19	Now, whether so, for example, in
20	Paragraph 205 I provide additional information about
21	my opinion that even Voswinckel alone I wouldn't
22	necessarily need to use the combination to to
23	evaluate the additional limitations of Claims 2, 7,
24	and 8 as being obvious.
25	That doesn't prohibit or limit me

1	MAUREEN DONOVAN, Ph.D.
2	because or or and I'm not trying to communicate
3	that I didn't continue to evaluate the combination of
4	Voswinckel, Chaudry, Patton, and the OptiNeb-ir user
5	manual.
6	It's simply a brief statement of a
7	simplification of that grouping of of prior art
8	describing the obviousness of Claims 2 through 9.
9	BY MS. ASCARRUNZ:
10	Q. All right. So you stated that you're not
11	trying to communicate that you didn't continue to
12	evaluate the combination of Voswinckel, Chaudry,
13	Patton, and the OptiNeb-ir user manual.
14	Did you, in fact, continue to
15	evaluate the combination of Voswinckel, Chaudry,
16	Patton, and the OptiNeb-ir user manual in connection
17	with dependent Claims 2 through 9?
18	A. Again, I evaluated all of those as I was
19	forming my opinions about Claims 2 through 9; and the
20	information provided in Paragraphs 205, 206, and 207
21	are sort of the a succinct summary of some of the
22	key combinations and information that support my
23	opinion that those claims were made obvious.

user manual does not expressly teach an

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Do you agree with me that the OptiNeb-ir

1	MAUREEN DONOVAN, Ph.D.
2	opto-acoustical trigger?
3	A. I believe my recollection of the
4	OptiNeb-ir user manual is they do not expressly use
5	the phrase optico-acoustic trigger anywhere in the
6	user manual.
7	Q. Okay. Apart from using the phrase
8	directly, do you agree with me that the OptiNeb-ir
9	user manual does not expressly teach an
10	opto-acoustical trigger within the meaning of the
11	claims?
12	MS. ASCARRUNZ: Let me withdraw that question
13	and rephrase it so it doesn't have a negative in it.
14	BY MS. ASCARRUNZ:
15	Q. Is it your opinion that the OptiNeb-ir
16	user manual expressly teaches an opto-acoustical
17	trigger within the meaning of the claims?
18	A. Well, the OptiNeb-ir user manual
19	and I'm looking at Section 7 on Page 16 describes
20	lights that are provided through primarily the A
21	it's the A17 denotation or the multifunction lamp,
22	and there is information also about auditory signals
23	provided. I'm trying to find that.
24	Oh, I should have not skimmed, and I
25	should have read closer. So in Section 7 it's

describing the lighting system that's available in the OptiNeb-ir and in 7.0.3 it's describing an auditory or acoustic signal that's also available in the OptiNeb-ir nebulizer, and these are optical and

6 acoustic signals.

claims?

Let me ask my question again. Q.

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Is it your opinion that the OptiNeb-ir user manual expressly teaches an

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opto-acoustical trigger within the meaning of the

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Well, the -- the OptiNeb-ir user manual

13 describes components of the OptiNeb nebulizer that

14 function as optical and acoustic signals, and in --

15 and the user manual and the knowledge of a POSA

16 regarding how those optical and acoustic signals can

17 be used to communicate things about the device

18 function to the user indicates that a -- that the --

19 the -- the lights and sound, along with the knowledge

20 of -- knowledge of the POSA, knowledge of the prior

21 art, that using those to be able to signal the user

22 or to communicate with the user something about the

23 operation is -- is in keeping with being an optical

acoustic, and we can call that a trigger if we want.

25

24

Okay. You understand that the claims of 0.

1	MAUREEN DONOVAN, Ph.D.	
2	the '507 patent require an opto-acoustical trigger;	
3	correct?	
4	A. They use the term opto-acoustic trigger,	
5	yes.	
6	Q. Okay. Does the OptiNeb-ir user manual	
7	expressly teach that limitation?	
8	A. In the OptiNeb-ir user manual does not	
9	use that phrasing, and the '507 patent doesn't	
10	specifically define or limit what an opto-acoustical	
11	trigger is, and as a result there are optical	
12	properties or signals provided by the OptiNeb-ir, and	
13	there are acoustic signals provided by the	
14	OptiNeb-ir.	
15	And user knowledge, POSA knowledge	
16	would allow individuals to use those light and sound	
17	signals or know that one could adapt that that	
18	nebulizer to provide what triggers it is, if one	
19	wants to use the term trigger or signal or	
20	communication, about the operation of the device if	
21	they so chose.	
22	Q. Okay. I'm quoting your words verbatim	
23	here. It is your opinion that the '507 patent does	
24	not specifically define or limit what an	

opto-acoustical trigger is; correct?

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Well, I understand that there's probably

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a different definition to limit legally than what I use, so we'll just say define. That it doesn't define what it --

what the specific limitations to the optical acoustical trigger is in the claim.

So it's a -- something that involves -- or my understanding and recollection of the construction of that claim is that this is -it's something that involves an optical and an acoustic signal, and I'm choosing to use the term to communicate something about the device operation.

- In the Section 7.0.3 on Page 16 of 0. Exhibit 1006 that you referred to in a recent answer, the light that you referred to is just to signal through a color change whether the nebulization process is on or off; correct?
- Well, in the particular configuration Α. being described in this user manual, that -- that is the description that's being provided for this specific use, but a POSA would understand that if they had a potentially different use for that light and that -- and later that sound, that the device could likely be configured to also have other

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7	as not
8	BY MS.
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10	OptiNeb
11	device
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13	ventila
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15	there's
16	potenti
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MAUREEN	DONOVAN.	Ph. D	)

information communicated about the operation of the device from the lights or the sounds.

MS. ASCARRUNZ: Okay. In my question I didn't ask anything about what a POSA would understand, so I move to strike everything after but as not responsive in that previous answer.

## BY MS. ASCARRUNZ:

- Q. The sound that you referred to in the OptiNeb-ir user manual is only to indicate when the device is switched off; correct?
- A. In the configuration described in this ventilator user manual it indicates that the sound is initiated when the nebulizer is switched off, but there's nothing that implies that that's the only potential use for that sound.
- Q. Is there anything that implies additional uses for that sound?
- A. Well, those additional uses could be just based in what a POSA determines they would like that nebulizer to be able to accomplish that are beyond what the user manual for the OptiNeb-ir and its ventilation function is being communicated to the users.
  - Q. Within this OptiNeb-ir user manual is

Well, again, this -- this user manual

there a location that describes a light and a sound

simultaneously signaling a patient to synchronize

specifically provides information to users who are

ventilator, but the OptiNeb-ir was able to be used

for non-ventilator based purposes, and a POSA or a

user or a prescriber could attribute additional

particular user manual to those lights or sounds.

opinions about what a POSA or a user would have in

described in this user manual, and I want to ask:

that the OptiNeb-ir user manual nowhere describes a

light and a sound simultaneously signaling a patient

user manual that is expressly describing the use of

the OptiNeb-ir in conjunction with a ventilator

to synchronize each breath to each pulse?

their minds, and my question is to what is explicitly

I understand that you have several

Do you disagree with me when I say

And, again, the version of the OptiNeb-ir

meaning outside of what's specified in this

using the OptiNeb-ir in -- in conjunction with a

each breath to each pulse?

Q.

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doesn't contain specific information about the use of

lights and sounds and individual breaths of a user,

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1	MAUREEN DONOVAN, Ph.D.
2	but there there the knowledge of what the
3	OptiNeb-ir device capabilities are are not subject or
4	is not that knowledge is beyond what the specific
5	information in a user manual for a specific
6	configuration of the device is intended to be.
7	Q. I'm going to ask my question again
8	because I don't think you answered it.
9	Do you disagree with me, yes or no,
10	when I say that the OptiNeb-ir user manual nowhere
11	describes a light and a sound simultaneously
12	signaling a patient to synchronize each breath to
13	each pulse?
14	MR. MATHAS: Object to the form.
15	BY THE WITNESS:
16	A. The OptiNeb-ir is a nebulizer that's able
17	to be used in a number of different configurations.
18	The user manual that we are looking
19	at right now that is a user manual describing the use
20	of the OptiNeb-ir configured to be used with a
21	ventilator does not address the OptiNeb-ir being used
22	for patients who are able to take distinct breaths
23	directly from the nebulizer.
24	BY MS. ASCARRUNZ:
25	Q. I'm sorry.

1	MAUREEN DONOVAN, Ph.D.
2	Does that mean, yes, you agree with
3	me?
4	A. My answer stands.
5	Q. Are you unable to answer the question,
6	yes or no, whether you agree with me that the
7	OptiNeb-ir user manual nowhere describes a light and
8	a sound simultaneously signaling a patient to
9	synchronize each breath to each pulse?
10	MR. MATHAS: Object to the form.
11	BY THE WITNESS:
12	A. The OptiNeb user ir user manual that
13	is described by this by Exhibit No. 1006 is a user
14	manual describing the OptiNeb-ir under its artificial
15	respiration or ventilation configuration, and in that
16	specific user manual it does not describe the use
17	of and I'll try to paraphrase what you asked
18	lights or sounds synchronized to the breaths of the
19	individual.
20	BY MS. ASCARRUNZ:
21	Q. The light on the OptiNeb-ir as described
22	in the OptiNeb-ir user manual is located on the front
23	of the device; correct?
24	A. Let's do we want to use the picture on
25	the cover and define front and back?

1	MAUREEN DONOVAN, Ph.D.
2	Q. Well, let me rephrase it this way.
3	Where on the device is the light
4	located? If we're looking at Page 1 of Exhibit 1006,
5	where is the light that you referenced located?
6	A. The light is in the the area of the
7	device that also contains the start and stop button
8	and the on and off button and information from an LED
9	display, and I believe that it has that LED
10	display provides multiple different forms of
11	information to the users.
12	Q. Okay. In one of your previous answers
13	you indicated that a POSA would understand and let
14	me just so you so you know where I'm quoting
15	from you that, quote, "A POSA would understand
16	that if they had a potentially different use for that
17	light and that and later that sound, that the
18	device could likely be configured to also have other
19	information communicated about the operation of the
20	device from the lights or the sounds."
21	Do you recall that testimony?
22	A. Yes.
23	Q. Okay. When you say, "could likely be
24	configured." is it your opinion that the OptiNeb-ir

as described in this manual could be configured to

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have a light and a sound simultaneously signal a user

3

to synchronize each breath to each pulse?

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A. Well, as a POSA, I'm aware that there --

This device, as described in this

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there were devices that did that very thing.

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manual, may not distinctly be set up to do that in

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its default programming; but since it contains a

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light and contains -- and has the ability to produce

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a sound, it would be -- or I'd have every expectation

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that it could be configured to use those sounds and

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that light in other manners beyond simply what

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they're being used for in -- as described in this

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specific use in this user manual.

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configure the device to be used in the other manners

And what would a POSA have to do to

Well, I -- I really haven't spent very

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that you described?

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19 much time thinking about the details of what -- how

and sound in this device, and I'd have every

in addition to what they currently communicate.

20

one might be able to do that, but it provides --

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there -- there are built-in capabilities for light

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expectation that those lights -- that light and sound

capability could be configured to communicate things

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1	MAUREEN DONOVAN, Ph.D.
2	Q. In the Page 1 image that we were looking
3	at, you identified the lights being on the same side
4	of the device or where the start and stop buttons
5	are.
6	Do you recall that?
7	A. Yes, I'm using the diagram on Page 16 to
8	help me with that. It indicates that the
9	multifunction lamp, which is A17 when described, as
10	having well, it has it can light up yellow.
11	And let's see. And apparently,
12	according to 7.0.2, can light up green, so is changes
13	color, but it's present next to the LED panel.
14	Q. And in the image shown on Page 1 of the
15	manual, on the image on the left, the upper most blue
16	portion, what is that?
17	A. That's the mouth piece for the device.
18	Q. So that's where the patient would put his
19	mouth?
20	A. Yes.
21	Q. And when the patient has his mouth on the
22	device, can he see the light that is on the device?
23	A. I'm potentially. I'm not sure.
24	Q. Does this manual teach a person how to
25	reconfigure the lights and sounds for other purposes?

Well, that's not the intent of the user

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A.

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manual or operating instruction manual for a specific configuration.

Q. In your declaration for the '507 patent still, your Ground 2 -- sorry -- your Combination 2

- includes the references Voswinckel, Chaudry, Patton, and the OptiNeb-ir user manual; correct?

  A. So -- so that you don't have to repeat
- your question, Combination 2, as described right above Paragraph 179, include "Voswinckel in view of Chaudry, Patton, and the OptiNeb-ir user manual."
- Q. Okay. It is your position that

  Voswinckel teaches a therapeutically efficacious treatment; right?
- A. Voswinckel describes the use of treprostinil to a group of patients.

I'd have to look at that abstract again to remember exactly the cross section of patients, but the summary communication of that abstract is that the pulmonary administration of treprostinil demonstrated reductions in pulmonary -- I have to remember exactly what they measured -- but they decreased the pulmonary pressure.

And in a group of patients on

MAUREEN DONOVAN, Ph.D.
longer-term use they also saw good what they
what would be considered efficacy or therapeutic
effect in a small number of patients.
Q. So, yes, it is your position that the
Voswinckel reference teaches the therapeutically
efficacious treatment; correct?
A. I guess I'd like to take a look at the
Voswinckel reference to refresh my memory to make
sure that I'm answering your question accurately.
Q. Okay. Let me direct you to Paragraph
186. The first sentence there states: "Since
Voswinckel teaches that a therapeutically efficacious
treatment was obtained using the OptiNeb ultrasonic
nebulizer" And then the sentence continues.
Do you see that?
A. Yes.
Q. So is it your opinion that Voswinckel
teaches a therapeutically efficacious treatment using
the OptiNeb ultrasonic nebulizer?
A. Yes, it is.
Q. Okay. So now I'm going to switch back to
questions that address both declarations.
A. Okay.
Q. So, again, if for whatever reason one of

1	MAUREEN DONOVAN, Ph.D.
2	my questions requires a different answer depending on
3	which patent we're talking about, please let me know,
4	and we can try to parse it out.
5	A. Yes. Okay.
6	MS. ASCARRUNZ: All right. I'm handing you
7	Exhibit 1003 in both proceedings.
8	BY MS. ASCARRUNZ:
9	Q. Dr. Donovan, do you know what this
10	exhibit is?
11	A. This is a copy of the abstract that we've
12	been referring to in shorthand as Voswinckel in the
13	last couple of questions, and the pages prior to that
14	are information about where that abstract came from,
15	so the print copy of the journal that the abstract
16	appeared in following its presentation at the
17	Scientific Session of the American Heart Association
18	in 2004.
19	Q. And this is the same Voswinckel that you
20	refer to in your Grounds 2 and 3; right?
21	A. Let me just make sure, but yes.
22	Q. You rely on the fact that Voswinckel
23	discloses a "pulse OptiNeb ultrasound nebulizer";
24	correct?
25	A. Yes.

1	MAUREEN DONOVAN, Ph.D.
2	Q. What model of OptiNeb was used in
3	Voswinckel?
4	A. The abstract doesn't specifically say
5	which model number, but it was a model that was able
6	to be used in a pulsed fashion.
7	Q. Well, in your opinion all OptiNebs are
8	able to be used in a pulse fashion; correct?
9	A. I think there are ways of configuring
10	nebulizers to be used in a pulsed fashion whether
11	they're commercially labeled or described as pulsed
12	or not. As a individual is trying to communicate
13	what they did in an abstract, the the one of
14	the general objectives is to be as clear as possible
15	and in as few of words as possible.
16	So if they if Voswinckel is
17	describing a pulsed OptiNeb ultrasound nebulizer, a
18	POSA would view that as an OptiNeb nebulizer that was
19	commonly known to be able to be used in a pulsed
20	manner.
21	Q. Would that include a nebulizer that works
22	exclusively in a continuous fashion with an on-off

words that a scientist can put into an abstract.

switch?

A.

23

24

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Again, the -- the very limited number of

1	MAUREEN DONOVAN, Ph.D.
2	They are going to communicate as accurately as
3	possible the the methods they used and the
4	conclusions they drew and the experiments they
5	conducted.
6	So by describing a pulsed OptiNeb
7	ultrasound nebulizer in the abstract, a POSA would
8	recognize that these individuals used an OptiNeb
9	nebulizer that had or that was that was designed
10	or the the manufacturer had built in a methodology
11	that was clearly understood by users to be how it
12	could be used in a pulsed manner.
13	Q. Let me direct your attention to
14	Paragraph 179 of your declaration in the '240 patent.
15	A. Okay. 179 in the 240?
16	Q. Yes.
17	A. Okay.
18	Q. It is your opinion that a POSA would look
19	to the specific OptiNeb-ir user manual, that is
20	Exhibit 1006, because Voswinckel discloses the use of
21	an OptiNeb; correct?
22	MR. MATHAS: Object to the form.
23	THE WITNESS: Will you repeat the question,
24	please?
25	

1	MAUREEN DONOVAN, Ph.D.
2	BY MS. ASCARRUNZ:
3	Q. It is your opinion that a POSA would look
4	to the specific OptiNeb-ir user manual, that is
5	Exhibit 1006, because Voswinckel discloses the use of
6	an OptiNeb; correct?
7	MR. MATHAS: Object to the form.
8	BY THE WITNESS:
9	A. No. The statement that I put in my my
10	expert declaration is that a POSA would be motivated
11	to look at the specifications of the device to help
12	them understand how that device operated so that they
13	would have a better understanding beyond the few
14	words that Voswinckel was able to include in his
15	abstract regarding how that device produced the
16	therapeutically effective aerosol of treprostinil.
17	Q. Okay. And when you say the
18	specifications of that device, what device are you
19	talking about?
20	A. Of the pulsed ultra OptiNeb nebulizer
21	described in the Voswinckel abstract.
22	Q. And it's your opinion that the OptiNeb-ir
23	user manual contains the specifications of the device
24	that was used in Voswinckel?
25	A. I'm saying that the Opti the

1	MAUREEN DONOVAN, Ph.D.
2	specifications of the OptiNeb-ir, be it it's
3	described in the user manual that we've been
4	discussing as Exhibit 1006, has contains some
5	specifications.
6	Other specifications, if they're not
7	contained in that user manual, would be readily
8	accessible from from the Nebu-Tec company, the
9	manufacturer of that nebulizer, if they were
10	contacted, and a specification that they actually had
11	measured and wasn't proprietary for some reason,
12	those specifications are readily shared among
13	scientists, users, anybody else.
14	So if there are some
15	specifications in the user manual, but not all of the
16	specifications for the device, but those other
17	specifications, again, are easily available, either
18	from the manufacturer or potentially from other
19	sources.
20	Q. Okay. And those other specifications
21	that are easily available from the manufacturer or
22	potentially from other sources, are they part of your
23	Combination 2?
24	A. Well, the OptiNeb-ir user manual and

other information known about the OptiNeb-ir user --

1	MAUREEN DONOVAN, Ph.D.
2	ir nebulizer from the prior art are are what I've
3	used to form the basis of my opinion.
4	MS. ASCARRUNZ: Do you still have Voswinckel
5	in front of you?
6	BY MS. ASCARRUNZ:
7	Q. Do you agree with me that Voswinckel does
8	not expressly state the dose that was delivered?
9	A. Voswinckel does not describe a specific
10	number of milligrams of treprostinil that each
11	patient received as a distinct description within the
12	abstract.
13	Q. Okay. But it's your opinion that such
14	information could be derived by combining the
15	information from Voswinckel and the information from
16	the OptiNeb-ir user manual; correct?
17	A. Yes, that's my opinion, that knowledge
18	about the operation of the OptiNeb-ir and the
19	information provided in the Voswinckel abstract would
20	allow a POSA to to determine within to
21	determine a likely dose that the individuals
22	received.
23	Q. Is the nebulization rate of an OptiNeb

the same when it is switched from a continuous mode

to a pulsed mode?

24

### MAUREEN DONOVAN, Ph.D.

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A. I believe it's certainly possible to have them be the same. I'd have to have some further information regarding the -- the differences between the configurations to be sure that the -- that the same capabilities under all circumstances existed in both, but it would be my anticipation that the -- well, I don't -- I'm not -- between generations there may have been additional enhancements in the -- the output rates that were being evaluated in some of those -- in some of the generations of OptiNebs.

So I can't say specifically. I'd need some further information to determine, but in --

- Q. I'm sorry. Are you done?
- A. In most cases I would expect the -the -- the user-based ranges to be quite similar;
  and, again, a POSA could easily get that information
  from Nebu-Tec or from other sources that had those
  specifications to confirm that they were the same.
- Q. In the user manual do you know what the ir in the designation OptiNeb-ir means?
- A. I knew at one time. I'm not sure that it actually says specifically in English what the ir means.

And I'm nearly certain that the I

1	MAUREEN DONOVAN, Ph.D.
2	stands for intermittent, but I can't place what the R
3	stands for in my memory.
4	Q. Okay. The OptiNeb-ir that is described
5	in this manual has a way of ensuring that the
6	inhalation is not longer than the exhalation; right?
7	A. That's my understanding based on
8	there's a section in here on Page 21 it describes
9	that the active phase cannot be greater or longer
10	than the passive phase.
11	Q. Okay. Could you direct me to where it
12	says that?
13	A. On Page 21, the very top paragraph.
14	Q. Got it.
15	In Paragraph 174 of your
16	declaration actually strike that Paragraph
17	175 of your declaration actually strike that
18	again 174 of your declaration, and I'm talking
19	about the '240 declaration.
20	Although this questioning I believe
21	applies universally to both patents, so, again, we're
22	in that universe of talking about both of them, so if
23	you disagree with me and think that your answers
24	differ, again, please let me know.
25	A. Okay.

	Page 79
1	MAUREEN DONOVAN, Ph.D.
2	Q. In that paragraph you conclude well,
3	that a patient may inhale from somewhere between two
4	to three seconds.
5	Do you see that?
6	A. Yes, as an estimate. Yes, I see that.
7	Q. And where do you get the three seconds
8	from in that sentence?
9	A. Well, I think the the three is
10	included because when you when you do the the
11	math around 12 times per minute and 15 times per
12	minute and give an equal amount of time to inhalation
13	and exhalation, you end up with some decimals, so I
14	was just giving what would be a physically possible
15	range because you can't have a decimal of a of a
16	breath and this these are just general estimates
17	of a the duration of time for an inhalation.
18	They're not meant to be it either has to be two
19	seconds or it has to be three seconds.
20	Q. Got it.
21	But in so understanding you can't
22	have a decimal of a breath, you can certainly have
23	decimals of seconds; right?
24	A Ves

And if we were to be more precise, the

1	MAUREEN DONOVAN, Ph.D.
2	three seconds would actually be two and a half;
3	right?
4	A. Given the structure of this of the
5	introductory limiting to the inhalation, exhalation
6	cycle taking somewhere between four seconds and
7	five seconds, yes, then the inhalation representing
8	50 percent of that time would have been two and a
9	half.
10	Q. Okay. And is it possible that a patient
11	would inhale for one second?
12	A. Yes, it is possible that patients could
13	inhale for one second.
14	Q. So I'd like to look at your calculations
15	in Paragraph 175, and there you note that the
16	OptiNeb, quote, could be configured to generate an
17	output of 0.173 mils per min.
18	Do you see that?
19	A. Yes.
20	Q. And then you include two bullets to
21	calculate the micrograms per breath in that scenario;
22	right?
23	A. That's correct.
24	Q. I'd like to look at the first bullet
25	where you have the 3.46 micrograms per breath number.

-		
1.7		
- 3		
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## Do you see that?

A. Yes.

Q. If you were to administer that amount across three breaths, that yields a 10.38 microgram total dose; right?

A. In the time I've spent looking back and forth across these I could have probably done the multiplication in my head, but, yes.

- Q. Okay. So this 10.38 micrograms is a total dose that one could get using the information from the OptiNeb manual and Voswinckel; right?
- was being operated at a unusually low flow rate, then these would be the dose values calculated based on Voswinckel's three breaths, three-breath dose and 600 microgram per mil fill volume; but, again, the -- the output velocity of 0.173 mills per minute is a very slow output velocity. Patients don't like excessively slow outputs because it makes their nebulization periods longer; and since Voswinckel doesn't say anything about operating that pulsed ultrasonic nebulizer at a much slower rate than is typically used or desired by -- by the users, which, again, would -- especially in an earlier report

1	MAUREEN DONOVAN, Ph.D.
2	knowing that you had to administer it slowly, would
3	be an important thing to include, even in an
4	abstract, that a POSA would would not necessarily
5	initially select the .0173 [sic] mills per minute to
6	make their estimate of the dose that Voswinckel
7	delivered.
8	Q. Dr. Donovan, in Paragraph 175 of your
9	declaration you state that: "The Nebu-Tec website
10	also reported that an earlier OptiNeb device could
11	nebulize at a rate of up to 0.6 mils per min, but
12	could be configured to generate an output of 0.173
13	mils per min"; right?
14	A. Yes, that's what it states.
15	Q. And for that reason you included the
16	calculations shown in that paragraph; right?
17	A. That's correct.
18	Q. In my previous question did you
19	understand me to ask any questions about excessively
20	slow rates?
21	MR. MATHAS: Object to the form.
22	BY THE WITNESS:
23	A. You may not have asked the question
24	specifically, but to give context to these isolated
2.5	namagraphs. I thought it nagagaary to include that

1	MAUREEN DONOVAN, Ph.D.
2	information.
3	Q. Okay. In your discussion in your
4	declaration as it was submitted to the Patent Trial
5	Appeal Board, did you find it necessary at that point
6	to discuss at any time excessively slow flow rates?
7	A. No, I was trying to communicate to the
8	Patent Trial Board that these things were known about
9	the OptiNeb device, and it allowed a POSA to
10	calculate the the likely range of doses that
11	patients being that patients described in the
12	Voswinckel abstract were likely to have received.
13	MR. MATHAS: Veronica, if you're at a
14	close to or at a good stopping point, may we take a
15	break.
16	MS. ASCARRUNZ: I may be at a minute or two,
17	but not right now.
18	MR. MATHAS: Okay.
19	BY MS. ASCARRUNZ:
20	Q. Okay. I see. So in this part of your
21	declaration you were attempting to describe the
22	likely range of doses that patients might have
23	received?
24	A. Well, since Voswinckel didn't describe in
25	specific detail the number of micrograms that those

patients received, and if that information had been desired by a POSA, I'm demonstrating that a POSA, knowing about the OptiNeb devices and simply being able to do algebra, could estimate what likely ranges of treprostinil those patients received and thus which -- what received doses were efficacious in the patients studied and described in the Voswinckel abstract.

- Q. You actually have no direct knowledge what the flow rate used in Voswinckel was; right?
  - A. Voswinckel doesn't directly include that or specifically include that information in his abstract; and, again, abstracts have a limited number of words that a -- that can be included, and unless an investigator does something to alter the typical use of a device or an instrument, they're using in measurement or using in experimental sense, they typically don't communicate that they're using the device as would normally be used.

They communicate when they have changed the device from how it would normally be used in an abstract so it's clear how they conducted the work; but, again, given the limited number of words they can use, verifying that they used the devices or

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1	MAUREEN DONOVAN, Ph.D.
2	did the experiments in the typical way is not
3	included in those abstracts.
4	Q. You've mentioned a couple of times the
5	limited number of words one can use in an abstract.
6	Is there a word limit that is placed
7	on abstracts?
8	A. It depends on where you're submitting the
9	abstract to. Every abstract I've nearly every
LO	abstract I've submitted, some of the regional
11	meetings I've presented at don't have word limits,
L2	but near I can't think of a national meeting that
13	I have presented an abstract at that didn't limit
L4	didn't tell me what the word count limit was, and in
1.5	some cases we get down to space count limits for the
16	abstract.
L7	Q. So is it your opinion that the
18	calculation you have at the top of Page 74 that
19	includes a 10.38 microgram per three breath, that
20	that couldn't have been a result of combining
21	Voswinckel and OptiNeb?
22	A. No, if if Voswinckel had used a output
23	rate that was likely to be provided by the OptiNeb,
24	that patients with two second breaths would likely

receive a dose within that range.

25

1	MAUREEN DONOVAN, Ph.D.
2	Q. So in your calculations on these pages at
3	Paragraph 175 one of the alternative possibilities
4	for the different parameters that could be combined
5	of the OptiNeb and Voswinckel you have there as the
6	first bullet point a possibility of 3.46 micrograms
7	per breath; correct?
8	A. Yes, the the first bullet point
9	communicates that at the slowest flow rate that I was
10	able to identify the OptiNeb device worked at that
11	each breath would or each two second breath would
12	provide a dose of 3.46 micrograms of treprostinil.
13	Q. And I think earlier you said it was
14	possible that a one second breath could also happen.
15	In that case the micrograms per
16	dose sorry micrograms per breath would be 1.73
17	micrograms; correct?
18	A. Yes, that's correct.
19	MS. ASCARRUNZ: Okay. This is a good time
20	for a break.
21	THE VIDEOGRAPHER: Going off the record.
22	12:28 p.m.
23	(WHEREUPON, a lunch recess
24	was had.)
25	THE VIDEOGRAPHER: Going on the record. This

1	MAUREEN DONOVAN, Ph.D.
2	marks the beginning of Media No. 3. The time is now
3	1:20 p.m.
4	MS. ASCARRUNZ: Welcome back, Dr. Donovan.
5	THE WITNESS: Thank you.
6	MS. ASCARRUNZ: For certainly at least the
7	next little while I'm going to be talking about your
8	ground or Combination 3, and this is discussion is
9	going, again, talk about both patents, so if you feel
10	the need to identify one particular patent over the
11	other in your answers, just please let me know.
12	THE WITNESS: Okay.
13	BY MS. ASCARRUNZ:
14	Q. So in your declaration you for both
15	patents you rely on a Combination No. 3; right?
16	A. I describe a Combination No. 3, yes.
17	Q. And that relies on what you call the
18	EU Community Register; right?
19	A. Yes.
20	Q. What precise exhibit numbers is or
21	number or numbers is the EU Community Register?
22	A. Well, let me see let me find the
23	combination as I'm describing it and see if I can
24	help you with that.
25	All right. Well, what I'm using

1	MAUREEN DONOVAN, Ph.D.
2	to what I'm using a shorthand to describe the
3	EU Community Register starts being described about
4	Paragraph 101 in the 507 declaration that I've
5	provided.
6	Q. Uh-huh.
7	My question was what exhibit
8	number do you mean by EU Community Register?
9	A. Well, the the EU Community Register
10	contains a number of documents about medications that
11	are available and approved by the European Union,
12	contains information about a lot of other European
13	Union activities.
14	The Community Register of Medicinal
15	Products is the area that I was looking at.
16	On pages following I provide URLs to
17	the specific pages where you can find information
18	about Ventavis, and there are exhibit numbers
19	144 or I guess 1043. I'm sorry. I was looking at
20	the footnote numbers, but 1043, 1051, which I believe
21	are printed pages from pages that are available from
22	the website, so the European the EU Community
23	Register really is not a printed document since the
24	EU was was formed and continues to operate as

as a -- as an entity. They formed when it was --

1	MAUREEN DONOVAN, Ph.D.
2	communication via computers and websites was actually
3	faster and potentially more important than print
4	versions of their work, so I believe most of most
5	of the information that goes on at the EU is website
6	available rather than hard publication available.
7	So the when I'm describing EU
8	Community Register and provided a couple of examples
9	of the the specific Web pages where that
10	information is is available, that's the best way
11	to provide that information because download
12	printing out the entire contents of the website from
13	the European Community EU Community Register would
14	probably be excessive and difficult to wade through.
15	Q. In your Combination 3 in connection with
16	both patents, when you say, "EU Community Register,"
17	you're saying that is not contained in the exhibits
18	to your declaration?
19	A. Well, if I could
20	MR. MATHAS: Object to the form.
21	BY THE WITNESS:
22	A. If I could take a look at those specific
23	exhibits, I could tell you what's what their
24	what they are or what they contain, what they were

intended to communicate.

1	MAUREEN DONOVAN, Ph.D.
2	My recollection is that that
3	those exhibits don't contain all of the possible
4	documents specifically about Ventavis available at
5	the time on the on the the EU Community
6	Register websites, but that the exhibits that I
7	provided give the English translations of a number of
8	the key documents that I used in my opinion.
9	Q. Okay. So in your Combination 3 when you
10	talk about the EU Community Register, are you saying
11	that that might encompass some documents that were
12	not printed that were not printed?
13	A. I don't
14	MR. MATHAS: Object to the form.
15	BY THE WITNESS:
16	A. Again, I don't remember exactly what
17	Exhibit 1053, 1043, and other exhibits, 1003, where
18	I'm using those to describe the EU Community
19	Register.
20	So until I could take a look at
21	those and tell you what what they what those
22	exhibits specifically are, I can maybe tell you if
23	there's there is other information that was
24	directly used to form my opinion.
25	Q. So then are you saying that when you talk

1	MAUREEN DONOVAN, Ph.D.
2	about the EU Community Register as part of
3	Combination 3, you're not referring to one single
4	document exhibit number in this proceeding?
5	MR. MATHAS: Object to the form.
6	BY THE WITNESS:
7	A. I'm I used documents available from
8	the EU Community Register, specifically documents
9	about the Ventavis product that was available in
10	Europe to to form my opinions about the
11	obviousness of the claims in these patents.
12	I need to look at the specific
13	exhibits to remind myself what those exhibits are and
14	what they communicate to be able to answer your
15	questions.
16	BY MS. ASCARRUNZ:
17	Q. Okay. So until you look at the specific
18	exhibit numbers, you cannot answer the question of
19	whether the EU Community Register, as part of your
20	Combination 3, is a specific exhibit number in this
21	proceeding?
22	MR. MATHAS: Object to the form.
23	BY THE WITNESS:
24	A. I don't recall the the exhibit number
25	designations of the materials that I used to form my

1	MAUREEN DONOVAN, Ph.D.
2	opinion regarding and used and called the EU
3	Community Register.
4	BY MS. ASCARRUNZ:
5	Q. Okay. What exhibits do you need to look
6	at to answer my question?
7	A. Well, we'll look at the exhibits that
8	I've footnoted to start with, so 1043, 1051, 1053,
9	1043.
10	Q. Okay. I'm handing you an exhibit marked
11	IPR Exhibit 1053.
12	Is this a component of the EU
13	Community Register of Combination 3?
14	A. Yes, this page was was used to to
15	find or be able to request the document described as
16	Commission Decision 592005 Amending Marketing
17	Authorization for Ventavis Iloprost, as a a
18	medicinal product for human use granted by Decision
19	3/2003/33448.
20	Q. I'm handing you Exhibit 1051.
21	Is this a component the EU Community
22	Register of Combination 3?
23	A. Again, this is a page from the website
24	that is essentially part of the pathway to get to the
25	Commission decision document I believe was the

1	MAUREEN DONOVAN, Ph.D.
2	pathway for this one. Unfortunately the URLs aren't
3	printed on these pages that correspond to the URLs in
4	my report, so I can't place exactly which one
5	corresponds to which of those.
6	Q. Can you answer the question of whether or
7	not Exhibit 1051 is a component of the EU Community
8	Register of Combination 3?
9	A. I can answer that this page was a page I
10	arrived at to get to the information that I used
11	about Ventavis to form my opinion, but exactly which
12	page it is that I've described in my in my
13	declaration, I without the URL or without being
14	able to find or to use the Web to to verify
15	which one of those it is, I can't comment on which
16	one it is, but it's a it's a pathfinding page.
17	Q. Okay. So third time I'm asking.
18	Can you answer is Exhibit 1051 a
19	component of the EU Community Register of
20	Combination 3?
21	A. Well, again, the Exhibit 1051 is a Web
22	page that as a POSA, if I'm looking for information

this page to be able to access the documents that I'm

about Ventavis that's in or that's part of the EU

Community Register, I would -- would likely get to

23

24

1	MAUREEN DONOVAN, Ph.D.
2	looking for, so it's it's merely an access page to
3	get the specific documents that a POSA is will
4	look to about Ventavis for information about that
5	product approved in the European Union.
6	Q. Okay. So, no, Exhibit 1051 is not a
7	component of the EU Community Register of
8	Combination 3?
9	A. Exhibit 1051 is part of the the
10	European Commission, and the European the EU
11	Community Register is my recollection is the
12	European the EU Community Register resides within
13	the European Commission document database.
14	Q. So are you saying that in Combination 3
15	when you talk about the EU Community Register, you're
16	referring to the entirety of the database?
17	A. No, as described in Paragraph 101 at the
18	end, I'm using the EU Community Register of Medicinal
19	Products to locate information about the Ventavis
20	label and other information about the Ventavis
21	approval in that was available in the European
22	Union.
23	Q. I'm handing you Exhibit 1043.
24	Is Exhibit 1043 a component of the
25	EU Community Register of Combination 3?

1			

A. Exhibit 1043 are the -- I seem to recall I think these are sort of the opening pages when you arrive at the information lodged on the European Commission about Ventavis as part of the Community Register of Medicinal Products, this is the -- the sort of Ventavis home page, and it contains summary information, and it contains links to other documents that describe the history of the European -- the -- the EMA and other -- I guess we'll stick with EMA -- EMA primarily decisions regarding Ventavis.

- Q. Dr. Donovan, I didn't ask you what your thinking was on everything about Exhibit 1043. I asked you whether Exhibit 1043 is a component of what you mean when you say EU Community Register in Combination 3?
- A. Well, again, Exhibit 1043 is a printout of the -- the Ventavis home page -- as a lack of a better term -- to describe where a POSA would find the information about Ventavis that is available on the website from the European Commission.
- Q. Are you refusing to answer my question of whether or not Exhibit 1043 is a component of what you mean when you say EU Community Register in talking about Combination 3?

1	MAUREEN DONOVAN, Ph.D.
2	MR. MATHAS: Object to the form.
3	BY THE WITNESS:
4	A. Well, again, to get the information about
5	Ventavis that I looked at through the European
6	Commission, I went through the URLs that are
7	described in my report, arrived at this Web page or
8	what's printed here as a portion of the Web page.
9	There are links within or that
10	that are listed below, each of those downward carrots
11	have links along with them. There is information
12	within those links that I also considered as part of
13	my in forming my opinion.
14	BY MS. ASCARRUNZ:
15	Q. Let me ask you to turn in your
16	declaration to Paragraph 213.
17	A. And this is my 507 declaration?
18	Q. Yes.
19	A. 213?
20	Q. Yes.
21	Do you see where it says: "I have
22	also found that Claims 1 through 9 are obvious over
23	Voswinckel in view of Chaudry, Ghofrani, and the
24	EU Community Register.
25	Do you see that?

1	MAUREEN DONOVAN, Ph.D.
2	A. I see that.
3	Q. When you use the term EU Community
4	Register, what exhibit numbers are you referring to?
5	MR. MATHAS: Object to the form.
6	BY THE WITNESS:
7	A. Again, I refer you back to the portion
8	of my expert declaration where I describe the
9	EU Community Register as I think it's in the
10	section of prior art, but I can't remember what that
11	section what I named that section scope and
12	content of prior art, and there's a description of
13	the EU Community Register and how I used the EU
14	Community Register to form my opinions which are
15	described in more specific detail in Combination 3,
16	which is described starting with Paragraph 213.
17	Q. And when you talk about the EU Community
18	Register, what exhibits are you talking about?
19	MR. MATHAS: Object to the form.
20	BY THE WITNESS:
21	A. Both the exhibits that that you've
22	presented to me, the contents that are available from
23	links through those exhibits, some of which are
24	are at least named or described or, you know, so, for
25	example, the Ventavis label is available through one

1	MAUREEN DONOVAN, Ph.D.
2	of the links on Exhibit 1043 I believe, and label
3	changes, label updates are available through those
4	links.
5	So that's what I'm using to refer
6	that's what I'm referring to as the EU Community
7	Register.
8	Q. You just referred to the Ventavis label.
9	In Paragraph 101 I believe of your
10	declaration you indicate that: "I understand that
11	this label was made publicly available by being
12	published by the European Union's EU regulatory
13	agencies"; is that correct?
14	A. That's what it states, yes.
15	Q. And is that your understanding?
16	A. That is my understanding.
17	Q. Is that are you presenting an expert
18	opinion of that. Or is that an assumption you were
19	given by counsel?
20	A. No, I'm understanding that based in what
21	I what I know about how the European Union handles
22	drug approvals and what how regulatory bodies make
23	labels available for for public access, and so
24	the the European Union one of the European
25	Union's methodologies of communicating label

# MAUREEN DONOVAN, Ph.D.

2 information is through the community register.

- Q. When was the community register first available online?
- A. After the European Union formed and certainly before 2005.
- Q. You're expressing an expert opinion that the European Union Community Register was available online before 2005?
- A. I -- I can't express that opinion as an expert. I express it as I certainly know many documents from the -- and, again, being U.S. based I refer to the FDA more frequently than I refer to documents available from the EU or other counties, and -- and so I know about things that were available online in around 2004 and 2005 from the FDA or U.S.-based organizations.

I would as a POSA certainly anticipate that the EU used the same forms of communication as the pharmaceutical industry, in particularly regarding pharmaceuticals, was globalized significantly by 2005, so to be able to communicate that information to individuals whether they be part of the European Union or whether they be outside the European Union, one of the most expedient

1	MAUREEN DONOVAN, Ph.D.
2	ways of doing that was via the Web, and in 2000 so
3	I'm I'm basing my opinion on as a as my
4	judgment of data basis that were easily available in
5	the early 2000s and the preference for communication
6	using Web-based materials by regulatory bodies.
7	I I don't have specific knowledge
8	of this being available online, but I don't have any
9	reason to believe it wasn't.
10	Q. In Paragraph 106 you indicate that you
11	searched the European Commission's Register of
12	Commission Documents.
13	Do you see that?
14	A. Yes, I see that.
15	Q. And then you have a URL in that
16	paragraph?
17	A. Yes.
18	Q. And you cite to in Footnote 147
19	Exhibit 1051?
20	A. Yes.
21	Q. Is Exhibit 1051 the URL?
22	A. I don't know that it's the specific
23	printout of that URL. It refers to the European
24	Commission where the footnote is placed.
25	Q. Okay. You indicated that you searched

1	MAUREEN DONOVAN, Ph.D.
2	for Ventavis on that website; correct?
3	A. Correct.
4	Q. And when you searched for Ventavis did
5	you do this personally or?
6	A. I did this, yeah.
7	Q. And when you searched for Ventavis, there
8	was an option for full text search; correct?
9	A. You know, I'd have to have the website in
10	front of me to remember the choices, but there
11	were there were options for, as I as I state
12	here, so that it was clearly understood which
13	selections I made, that there were there were
14	version selections, and I selected the all versions.
15	MS. ASCARRUNZ: Can we go off the record for
16	a second.
17	THE VIDEOGRAPHER: Off the record at
18	1:45 p.m.
19	(WHEREUPON, a discussion
20	was had off the record.)
21	THE VIDEOGRAPHER: Going on the record. The
22	time is 1:47 p.m.
23	BY MS. ASCARRUNZ:
24	Q. So, Dr. Donovan, looking again at
25	Paragraph 106, there's a URL that's included there

1	MAUREEN DONOVAN, Ph.D.
2	that I've typed into my iPad, and I will hand to you
3	so you can walk us through what it is that you did.
4	A. Okay.
5	Q. So you indicate in your paragraph that,
6	"Using the document search feature I searched for
7	Ventavis and selected the radio button to search all
8	versions."
9	A. So I'm on essentially the home page,
10	which is Exhibit 1051, and I'm going to choose
11	document search, and then I'm going to type Ventavis
12	I believe into all versions okay.
13	So the URL must have already gotten
14	me to the Ventavis stuff I hope.
15	Q. Could you talk us through what you see
16	and what you're clicking on?
17	A. I'm in I'm not clicking on very many
18	things here. I'm in the section that says, "Title,"
19	and because I can't type very well, it just took me
20	away from the page.
21	So the section that says, "Title"
22	I'm typing Ventavis into words in the title because,
23	as I described, I came in to this site having already
24	I think typed in Ventavis, and now I'm choosing where
25	the language of the "Title" is "All."

1	MAUREEN DONOVAN, Ph.D.
2	There's one word at least and "sort
3	order by document date descending."
4	And I reach a page that looks like
5	this that has a lot of document titles on it in many
6	languages.
7	Q. And in your paragraph you said that you
8	reached a page from which a POSA could request the
9	commission decision, including a September 5, 2005
10	decision.
11	Do you see that on the Web page?
12	A. Well, I think there's I have to make a
13	selection from among the documents that show up here,
14	and I'm going to potentially reconsider my "all
15	languages criteria."
16	No, I'm not. Maybe not. I'm
17	clicking through to find years that are approximately
18	2005 to shorten up what I need to look at.
19	Okay. And on Page 3 of the 4 that
20	were linked to my previous search I come to a title
21	that is "Commission Decision of 5/9/2005. Amending
22	the Marketing Authorization for Ventavis-Iloprost a
23	Medicinal Product for Use Granted by Decision
24	C\2003\3348."
25	Q. And what happens when you click on that?

1	MAUREEN DONOVAN, Ph.D.
2	A. I click on "document request," and it
3	asks me to fill out a form to request that document.
4	Q. It doesn't take you to the document;
5	correct?
6	A. It does not.
7	Q. And did you previously fill out that form
8	yourself personally?
9	A. I did not fill it out personally, but I
10	have seen hard copies of the document.
11	Q. So since you did not fill it out
12	personally, do you know how long it took to receive
13	the document after that form was filled out?
14	A. I don't have any information about that.
15	Q. So you're unaware that when you click on
16	that document request it advises you that you have to
17	wait 30 days to receive the document; correct?
18	A. I'll believe you, sure.
19	Q. And you're unaware that when you receive
20	an e-mail confirmation of the request form it
21	indicates you have to wait at least 15 days to
22	receive the document; correct?
23	A. I have to believe you. I didn't go
24	through those steps.
25	Q. Okay.

1	MAUREEN DONOVAN, Ph.D.
2	A. Do you want this back?
3	Q. Yeah, thank you.
4	Dr. Donovan, what devices was
5	Ventavis approved with?
6	A. It depends on the time period that you're
7	asking about.
8	Q. Let's say before May of 2006.
9	A. I guess I'd like the opportunity to take
10	a look at the Ventavis label to remind myself, but
11	there were several devices at that time that Ventavis
12	was approved for use.
13	Q. In the United States how many devices
14	were approved for use with Ventavis?
15	A. Again, I need to see the Ventavis label
16	for that period of time to be able to refresh myself
17	about how many devices were approved for use.
18	Q. You provide opinions in your declarations
19	about the Venta-Neb device; correct?
20	A. Yes, I do.
21	Q. And the Venta-Neb device is one that you
22	identify as having been approved for use with
23	Ventavis in Europe; correct?
24	A. Correct.
25	Q. So you know that at least the Venta-Neb

1	MAUREEN DONOVAN, Ph.D.
2	device was approved for use with Ventavis prior to
3	May of 2006; correct?
4	A. That is correct, yes.
5	Q. Was the Venta-Neb device approved for use
6	in the United States with Ventavis?
7	A. Before May 2006?
8	Q. Ever.
9	A. I'd have to take a look at the the
10	Ventavis label for from the FDA to refresh my
11	memory about that.
12	Q. Okay. I have the paragraph number in
13	your '240 declaration, so I'm going to ask you to
14	look at that one, and specifically Paragraph 198.
15	Why did you include the discussion
16	in Paragraph 198?
17	MR. MATHAS: Object to the form.
18	BY THE WITNESS:
19	A. Give me a minute to find out where I am
20	here.
21	BY MS. ASCARRUNZ:
22	Q. I just want to make sure we're looking at
23	the same thing because I see you looking for the
24	patent, and I'm not quite sure why.
25	Are you looking at Paragraph 198

1	

paragraph in the middle of the context, and what I

paged back to find was Combination 3, and -- and so

Paragraph 198 actually is a discussion of limitation

B1 of claims -- of Claim 1 I believe, and I wanted to

So now that I have put myself in place

refresh myself on what Claim B1 that we refer to in

where we -- where I am in my report, the information

in Paragraph 198 was -- is in this report to explain

the advantages of having each pulse be represented as

how users may interact with a nebulizer device and

a fixed amount of drug being delivered, so that if

patient wants to receive the intended dose that they

can -- that one of the advantages of using a fixed

dose per pulse or a per breath or inspiration from

change -- if -- if things happen, which things

happen, during a nebulization treatment and the

my report is, which is why I went to look at the

that starts: "As I explained above"?

3

2

A. Yeah.

4

Q. Okay.

Q. Okay.

5

6

A. But I mean we just started discussing a

'240 patent.

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David Feldman Worldwide A Veritext Company

the nebulizer, is -- is that if you have to stop for

www.veritext.com

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	1		
	4		

### MAUREEN DONOVAN, Ph.D.

3 4 5 some reason, you can restart and still receive the total dose that was intended, and it would be relatively easy for the user to adjust to that interruption in their -- in that particular nebulization opportunity.

8 9 10

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6

7

Q. Is it your opinion that a POSA would have a motivation to modify a device to deliver a fixed amount per pulse at least in part because a POSA would want to have a mechanism to allow the patient to generate pulses if they are interrupted by a fit of coughing or an urgent phone call?

A. Again, one of the advantages of using a fixed amount per pulse is that it's -- a user can understand how to still complete their intended dosing regimen. It's easy to communicate to the user how it is they need to -- to utilize their nebulization dosing regimen. It potentially can make designing individualized dosing regimens that are, again, easy for the user to adhere to.

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Because it's a -- it's a discreet countable unit, and users and prescribers are -- are used to thinking in terms of distinct units that total up to the total dose.

25

24

Q. I'm handing you Exhibit 1009.

day. I asked you whether this is a document you referred to in your declaration, not what it is or what you think about it.  MR. MATHAS: Well, I'm going to object to the form. The witness can answer the question as posed without your commentary. That has also continued throughout the day.  BY THE WITNESS:  A. Well, there's there's no date on the document, there's no title on this document. There is an indication that it was supplied by Watson, but I don't have recollection of every document that was supplied by Watson in this IPR, and I wanted to pose		rage 109
your declaration; yes?  A. I'll take a look at it, but.  Okay. And and, yes, this is these are the annex materials to the Q. Dr. Donovan, I apologize for  interrupting, but this has continued throughout the day. I asked you whether this is a document you referred to in your declaration, not what it is or what you think about it.  MR. MATHAS: Well, I'm going to object to th form. The witness can answer the question as posed without your commentary. That has also continued throughout the day. BY THE WITNESS:  A. Well, there's there's no date on thi document, there's no title on this document. There is an indication that it was supplied by Watson, bu I don't have recollection of every document that was supplied by Watson in this IPR, and I wanted to pos	1	MAUREEN DONOVAN, Ph.D.
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interrupting, but this has continued throughout the day. I asked you whether this is a document you referred to in your declaration, not what it is or what you think about it.  MR. MATHAS: Well, I'm going to object to the form. The witness can answer the question as posed without your commentary. That has also continued throughout the day.  BY THE WITNESS:  A. Well, there's there's no date on this document, there's no title on this document. There is an indication that it was supplied by Watson, but I don't have recollection of every document that was supplied by Watson in this IPR, and I wanted to pose	6	these are the annex materials to the
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MR. MATHAS: Well, I'm going to object to the form. The witness can answer the question as posed without your commentary. That has also continued throughout the day.  BY THE WITNESS:  A. Well, there's there's no date on this document, there's no title on this document. There is an indication that it was supplied by Watson, but I don't have recollection of every document that was supplied by Watson in this IPR, and I wanted to point	10	referred to in your declaration, not what it is or
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without your commentary. That has also continued throughout the day.  BY THE WITNESS:  A. Well, there's there's no date on thi document, there's no title on this document. There is an indication that it was supplied by Watson, bu I don't have recollection of every document that was supplied by Watson in this IPR, and I wanted to point	12	MR. MATHAS: Well, I'm going to object to the
throughout the day.  BY THE WITNESS:  A. Well, there's there's no date on this document, there's no title on this document. There is an indication that it was supplied by Watson, but I don't have recollection of every document that was supplied by Watson in this IPR, and I wanted to positive the supplied by Watson in this IPR, and I wanted to positive the supplied by Watson in this IPR, and I wanted to positive the supplied by Watson in this IPR, and I wanted to positive the supplied by Watson in this IPR, and I wanted to positive the supplied by Watson in this IPR, and I wanted to positive the supplied by Watson in this IPR, and I wanted to positive the supplied by Watson in this IPR, and I wanted to positive the supplied by Watson in this IPR, and I wanted to positive the supplied by Watson in this IPR, and I wanted to positive the supplied by Watson in this IPR, and I wanted to positive the supplied by Watson in this IPR, and I wanted to positive the supplied by Watson in this IPR.	13	form. The witness can answer the question as posed
BY THE WITNESS:  A. Well, there's there's no date on this document, there's no title on this document. There is an indication that it was supplied by Watson, but I don't have recollection of every document that was supplied by Watson in this IPR, and I wanted to point	14	without your commentary. That has also continued
A. Well, there's there's no date on this document, there's no title on this document. There is an indication that it was supplied by Watson, but I don't have recollection of every document that was supplied by Watson in this IPR, and I wanted to point	15	throughout the day.
document, there's no title on this document. There is an indication that it was supplied by Watson, bu I don't have recollection of every document that was supplied by Watson in this IPR, and I wanted to point	16	BY THE WITNESS:
is an indication that it was supplied by Watson, but I don't have recollection of every document that was supplied by Watson in this IPR, and I wanted to pos	17	A. Well, there's there's no date on this
I don't have recollection of every document that was supplied by Watson in this IPR, and I wanted to point	18	document, there's no title on this document. There
supplied by Watson in this IPR, and I wanted to poi	19	is an indication that it was supplied by Watson, but
	20	I don't have recollection of every document that was
out that similar annex documents were available from	21	supplied by Watson in this IPR, and I wanted to point
	22	out that similar annex documents were available from

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23

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the European Commission Web pages that I looked at

when I searched for Ventavis.

1	MAUREEN DONOVAN, Ph.D.
2	BY MS. ASCARRUNZ:
3	Q. Okay. In this document what is the
4	concentration of the nebulizer solution used for
5	Ventavis?
6	A. On Page 2 of Exhibit 10 1009 it
7	indicates that Ventavis is a 10 microgram per mil
8	nebulizer solution.
9	Q. And in the claims of the patents at issue
10	in these proceedings, the concentration of
11	treprostinil in the claims is 600 micrograms per mil;
12	correct?
13	A. That's my recollection, yes.
14	Q. So the claims require a concentration
15	60 times that found in this reference; correct?
16	A. It's getting late in the day, so, yes.
17	Q. And what is the total dosage that this
18	reference teaches with respect to Ventavis?
19	A. Well, the this reference describes
20	three different methodologies of administering or
21	three different nebulizers to administer Ventavis,
22	and for each of those nebulizers it describes a 2.5
23	microgram dose and a 5 microgram dose.
24	Q. And the concentration of treprostinil in
25	the claims is 15 to 90 micrograms; correct? I'm

1	MAUREEN DONOVAN, Ph.D.
2	sorry. Let me make that clear.
3	The concentration of treprostinil in
4	the claims of the patents at issues in these
5	proceedings is 15 to 90 micrograms; correct?
6	A. No, the amount in the claims is 15 to 90
7	micrograms.
8	Q. Thank you. I used the wrong words.
9	So the total dosage of treprostinil
10	in the claims at issue in the proceedings is 15 to 90
11	micrograms; correct?
12	A. The therapeutically effective single
13	event dose is comprised from 15 micrograms to 90
14	micrograms of treprostinil is what Claim 1 describes.
15	Q. Okay. So the claims of the patents
16	require a dosage of no less than three times that
17	reflected in this Exhibit 1009; correct?
18	A. If you're comparing the 5 microgram dose
19	of Ventavis to the 15 microgram dose of the
20	described in the claim, yes, that's a three times
21	difference.
22	Q. And up to potentially 36 times
23	difference; correct?
24	A. I'd have to actually do that calculation.
25	Let's see. 36 times. Gosh, I can't even multiply in

1	MAUREEN DONOVAN, Ph.D.
2	my head right now.
3	Q. Okay. Do you agree 90 divided by two and
4	a half?
5	A. Again, I'd like to have a calculator.
6	Q. Okay.
7	A. I'm not in the mood to do math in my
8	head or a piece of paper and a pencil. I would be
9	happy to do that, too.
10	Q. Okay. That's fine. We'll go on.
11	Does this document state that the
12	Venta-Neb device was a pulsed ultrasonic nebulizer?
13	A. In this particular document it doesn't
14	use the word pulsed ultrasonic nebulizer, but for
15	any but it describes a nebulization scheme that
16	includes a integer number of inhalation cycles; and
17	if one was not familiar with the Venta-Neb that was
18	approved for use with Ventavis, that information
19	would be readily available to anyone interested to
20	identify that it was a pulsed ultrasonic nebulizer.
21	Q. Where would that information be readily
22	available?
23	A. You can that information is available
24	in the scientific discussion of the approval.
25	You can look at the Venta-Neb user

1	MAUREEN DONOVAN, Ph.D.
2	manual. It also describes it as a that comes with
3	the Venta-Neb device administered with Iloprost.
4	It describes it as a or it's
5	understandable that that is a pulsed ultrasonic
6	nebulizer.
7	Q. Does anywhere in the European Community
8	Register indicate that the Venta-Neb was a pulsed
9	ultrasonic nebulizer?
10	A. I don't recall all of the details that I
11	read, so I don't know.
12	Q. This document, 1009, that you have in
13	front of you also teaches to jet nebulizer systems;
14	right?
15	A. The HaloLite and the Prodose nebulizer
16	were compressed air nebulizer systems.
17	Q. Okay. And they are also dosimetric
18	systems; correct?
19	A. That's how they're described in the
20	paragraph on Page 2.
21	Q. And they are governed by the patient's
22	breathing pattern; correct?
23	A. That's the general understanding for the
24	HaloLite and Prodose how they how they dose or
25	administer their doses of Ventavis.

1	MAUREEN DONOVAN, Ph.D.
2	Q. And with respect to the HaloLite and
3	Prodose, the dose is given as a measure of time and
4	not numbers of breaths; correct?
5	A. That's how it's described, yes.
6	Q. And that's, again, because it's a
7	dosimetric system; right?
8	A. Well, I'm not sure that that's
9	Q. Okay. Fair enough.
10	Is there a statement in this
11	reference anywhere that suggests that the Venta-Neb
12	nebulizer is preferred over the two compressed air
13	nebulizer systems?
14	A. I'd have to read the entire document, but
15	it's not my recollection there is a statement that
16	says one of these is preferred over the other.
17	Q. Are you aware that the Venta-Neb device
18	in Europe was approved with an additional nebulizer
19	before May 2006, and specifically I'm talking about
20	the I-Neb vibrating mesh nebulizer?
21	A. In some of the documents I've seen
22	regarding Ventavis I've seen the I-Neb referred to,
23	but I don't have an understanding of the timeframes
24	of when it was approved in the European Union or any

25

place else.

1	MAUREEN DONOVAN, Ph.D.
2	Q. Okay. But you are aware that the
3	Venta-Neb device was never approved in the United
4	States for use with Ventavis; correct?
5	A. I don't know that I'm specifically aware
6	of that, no.
7	Q. So you're not aware strike that.
8	In this Document 1009, at the top of
9	Page 3 there's a discussion that says, "For a dose of
10	5 micrograms Iloprost at mouth piece it is
11	recommended to complete two inhalation cycles with
12	2.5 microgram preset dose program with a filling of
13	one 2 mil ampoule."
14	Do you see that?
15	A. I see that.
16	Q. When it refers to an inhalation cycle
17	there, it's referring to the time it takes to deliver
18	the two-and-a-half preset dose; correct?
19	A. I suppose that that's how I would
20	interpret that, yes.
21	Q. In your declaration you refer to certain
22	claim limitations by a letter in brackets; correct?
23	So like
24	(WHEREUPON, there was
25	simultaneous speaking.)

1	MAUREEN DONOVAN, Ph.D.	
2	A. Especially for Claim 1?	
3	I'm sorry, but are you referring to	
4	the letters that we used that I've used to	
5	describe the subsections of Claim 1?	
6	Q. Yes. So, for example, Limitation C?	
7	A. Yes.	
8	Q. Okay. Do you agree with me that	
9	Limitation C requires a pulsed ultrasonic nebulizer?	
10	And, I'm sorry. I'm referring to Limitation C in the	
11	'240.	
12	A. Yes. As I've described in Paragraph 126	
13	in my	
14	Q. And you sorry. Were you done?	
15	A. That I was well, that I was just	
16	going to repeat that it says, "Said pulsed ultrasonic	
17	nebulizer comprising an opto-acoustical trigger which	
18	allows said human to synchronize each breath to each	
19	pulse."	
20	Q. Okay. So you agree with me that	
21	Limitation C requires that the pulsed ultrasonic	
22	nebulizer have an opto-acoustical trigger; yes?	
23	A. Well, it's it's the limitation	
24	states that it's a pulsed ultrasonic nebulizer	
25	with comprising an opto-acoustical trigger.	

1	MAUREEN DONOVAN, Ph.D.
2	Q. And the limitation also requires that the
3	optical that the opto-acoustical trigger must
4	allow the human to synchronize each breath to each
5	pulse; correct?
6	A. That's what the claims states, yes.
7	MR. MATHAS: And, Veronica, I believe we're
8	at the seven hours on the record mark.
9	MS. ASCARRUNZ: Okay. I will state for the
10	record and on the record that I don't think we're
11	limited to the seven hours given the SAS order that
12	instituted the additional grounds, but we will stop
13	at this point.
14	MR. MATHAS: Okay. Because I wait. For
15	the record, I also have an e-mail from your team
16	indicating that you would complete your examination
17	within the 3 hours and 20 minutes remaining on the
18	record.
19	Let's take a break, go off the
20	record. I'm going to have some questions.
21	THE VIDEOGRAPHER: Off the record at
22	2:14 p.m.
23	(WHEREUPON, a recess was
24	had.)
25	THE VIDEOGRAPHER: Going on the record.

- reviewed and used to -- to determine that Claims 1 through 9 were obvious.
- All right. And in that -- in that 0. discussion in Paragraphs 213 through 236 what references are you relying on?
- I'm relying on Voswinckel, Chaudry, A. Ghofrani, any the EU Community Register.
- And in Paragraph 220 you talk about some information that the community register provides about Ventavis.

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1	MAUREEN DONOVAN, Ph.D.
2	Do you see that?
3	A. Yes.
4	Q. And what reference are you relying on
5	there?
6	MS. ASCARRUNZ: Objection. Leading.
7	BY THE WITNESS:
8	A. Well, in Paragraph 220 I'm describing
9	things about the EU Community Register and the
10	Ventavis information there, and there's a footnote
11	that cites to Exhibit 1009.
12	Q. What is Exhibit 1009?
13	A. Exhibit 1009 was we were discussing
14	previously, and it's the it's annex documents on
15	the community register describing Ventavis and
16	essentially the Annex 1 is the summary of product
17	characteristics, and Annex 2 is the labeling and
18	package leaflet, and Annex 3 is the labeling for
19	Ventavis.
20	Q. All right. In counsel also asked you
21	some questions about some calculations related to the
22	OptiNeb user manual.
23	Do you recall those?
24	A. Yes.
25	Q. And one of the there was a calculation

1	MAUREEN DONOVAN, Ph.D.
2	or a discussion in that section about using a
3	nebulization rate of .173.
4	Do you recall that?
5	A. I do. I'm just trying to get to
6	Q. I'm sorry. Paragraph 200 and 201 I
7	believe in the in the '507 declaration.
8	A. All right. I'm there, yes.
9	Q. Okay. And the the the OptiNeb-ir
10	user manual that you used in connection with
11	Ground 2, did it include the .173 metric?
12	A. No, that metric was from other
13	information about OptiNeb. The specifications in the
14	user manual that's Exhibit 1006 only list the output
15	as 0.6 mils per minute.
16	Q. And what and that's in 1006 at what
17	page?
18	A. Page 28.
19	Q. Okay. In counsel's questioning about the
20	.173 limitation, she asked some questions about if
21	you used the 1 point I'm sorry the .173 metric
22	with a 1 second breath.
23	Do you recall that?
24	A. I do, yeah.
25	Q. And she had you do the math for her as to

MAUREEN DONOVAN, Ph.D.
what the output of that dosing would be; right?
A. For I I think I agreed with the
math that she presented, but, yes.
Q. Okay. And if we go back to
Paragraph 200, in Paragraph 200 you're using the .6
milliliter per minute what did you refer that to,
a speed?
A. The output rate.
Q. Output rate. Output rate.
Okay. So Paragraph 200, .6
milliliter per minute output rate; right?
A. Yes.
Q. And the calculations you did there were
at two and three seconds; correct?
MS. ASCARRUNZ: Objection. Leading.
BY THE WITNESS:
A. That's
MR. MATHAS: Let me ask that differently.
BY MR. MATHAS:
Q. What calculations did you perform in
Paragraph 200?
A. I performed estimates of the dose if an
individual was inhaling for two seconds and a second
calculation if they happened to be inhaling for three

1	MAUREEN DONOVAN, Ph.D.
2	seconds.
3	Q. And if you use counsel's assumption in
4	her questions earlier about one second, what would
5	that result in using a .6 milliliter per minute
6	output speed?
7	A. At the 600 microgram per mil
8	concentration that would result in a six microgram
9	dose per one second inhalation.
10	Q. And if you used a one second breath in
11	that calculation using the .6 output speed and the
12	600 microgram per milliliter solution, would that
13	change your opinions with respect to the obviousness
14	over Ground 2?
15	A. No, it wouldn't.
16	Q. Why not?
17	A. Well, because with let me look at a
18	specific to make sure that we're talking about the
19	range here.
20	So we're describing a range a
21	dose range of 15 micrograms to 90 micrograms and a
22	six microgram dose per one second inhalation, and
23	that given over three breaths or three inhalations is
24	18 micrograms, which is within the the limitation
25	describing 15 micrograms to 90 micrograms as a dose.

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1	MAUREEN DONOVAN, Ph.D.	
2	MR. MATHAS: All right. I have no further	
3	questions.	
4	We will read and sign the	
5	transcript.	
6	THE VIDEOGRAPHER: Going off the record.	
7	The time is 2:44 p.m.	
8	MS. REPORTER: Are you ordering the	
9	transcript at this time?	
10	MS. ASCARRUNZ: Yes.	
11	MS. REPORTER: Would you like a copy?	
12	MR. MATHAS: Yes. Just regular delivery for	
13	us.	
14	(Whereupon, at 2:44 p.m.	
15	the deposition was	
16	concluded.)	
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STATE OF)
) :ss
COUNTY OF)
I, MAUREEN DONOVAN, Ph.D., the
witness herein, having read the foregoing
testimony of the pages of this deposition,
do hereby certify it to be a true and
correct transcript, subject to the
corrections, if any, shown on the attached
page.
MAUREEN DONOVAN, Ph.D.
MAUREEN DONOVAN, Ph.D.  Sworn and subscribed to before me,
Sworn and subscribed to before me,

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## 2 CERTIFICATE

3

4

## CERTIFIED SHORTHAND REPORTER

OF

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I, Lynn A. McCauley, a Certified

Shorthand Reporter of the State of Illinois, CSR,

RPR, License No. 84-003268, do hereby certify:

That previous to the commencement of the examination of the aforesaid witness, the witness was duly sworn by me to testify the whole truth concerning the matters herein;

That the foregoing deposition transcript was reported stenographically by me, was thereafter reduced to typewriting under my personal direction and constitutes a true and accurate record of the testimony given and the proceedings had at the aforesaid deposition;

That the said deposition was taken before me at the time and place specified;

That I am not a relative or employee or attorney or counsel for any of the parties herein, nor a relative or employee of such attorney or counsel for any of the parties hereto, nor am I interested directly or indirectly in the outcome of

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Please read your deposition over carefully and make any necessary corrections. You should state the reason in the appropriate space on the errata sheet for any corrections that are made.

After doing so, please sign the errata sheet and date it.

You are signing same subject to the changes you have noted on the errata sheet, which will be attached to your deposition.

It is imperative that you return the original errata sheet to the deposing attorney within thirty (30) days of receipt of the deposition transcript by you. If you fail to do so, the deposition transcript may be deemed to be accurate and may be used in court.

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	MAUREEN DONOVAN, Ph.D. DATE
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## Federal Rules of Civil Procedure Rule 30

- (e) Review By the Witness; Changes.
- (1) Review; Statement of Changes. On request by the deponent or a party before the deposition is completed, the deponent must be allowed 30 days after being notified by the officer that the transcript or recording is available in which:
- (A) to review the transcript or recording; and
- (B) if there are changes in form or substance, to sign a statement listing the changes and the reasons for making them.
- (2) Changes Indicated in the Officer's Certificate. The officer must note in the certificate prescribed by Rule 30(f)(1) whether a review was requested and, if so, must attach any changes the deponent makes during the 30-day period.

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ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY.

THE ABOVE RULES ARE CURRENT AS OF SEPTEMBER 1,

2016. PLEASE REFER TO THE APPLICABLE FEDERAL RULES

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