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

NALOX-1 PHARMACEUTICALS, LLC,

Petitioner,

V.

ADAPT PHARMA OPERATIONS LTD., AND OPIANT PHARMACEUTICALS, INC.

Patent Owners

CASE IPR2019-00685
U.S. Patent No. 9,211,253

Video deposition of STUART ALLEN
JONES, Ph.D., held remotely via Zoom, on Friday,
May 1, 2020, commencing at 8:06 a.m., before
Kathleen McHugh, a Registered Professional
Reporter, Certified Realtime Reporter, Certified
Shorthand Reporter-NJ, License No. 30XI00180400,
and Notary Public.



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4 6 1 VIDEOGRAPHER: We are now on the video 1 is oxidative degradation, but there are others. 2 record. And I cited in my first report that also naloxone 3 This is the video deposition of is prone to photoinstability issues, i.e., 4 Dr. Stuart Allen Jones, taken by plaintiff -degradation under light. 5 petitioner, in the matter of Nalox-1 5 If we can go to Nalox 1201, the Pharmaceuticals, LLC v. Adapt Pharma Operations Donovan Supplemental Declaration, and paragraph 15. 6 6 7 Ltd., et al., hearing remotely with the deponent in 7 And you can blow up up until the line Watford, United Kingdom, on Friday, May 1st, 2020, 8 9 at 8:06 a.m. Great. 10 10 I am Martin Zinkel, the videographer. It says, Wyse discloses that 11 The court reporter is Kathy McHugh. We are from formulations 7, 9, 14 and 14A contained, quote, an 11 12 the firm of Advanced Depositions in Philadelphia, additional degradant, unquote, one that was not 12 Pennsylvania. 13 reported as being found in at least some of the other disclosed formulations. Since these 14 Counsel will be noted on -- the 14 15 appearances will be noted on the transcript, and 15 formulations were pH adjusted, quote, to accelerate 16 the reporter will now swear in the witness. degradation, unquote, of the naloxone -- and 17 STUART ALLEN JONES, Ph.D., having been 17 there's a citation given there -- a Formulator POSA 18 duly sworn, was examined and testified as follows: would have considered that, if the, quote, 19 **EXAMINATION** additional degradant, unquote, was a naloxone 20 BY MR. BERMAN: degradant, it would likely be an oxidation 20 21 Hello again, Dr. Jones. My name again 21 degradant. 22 is Rich Berman. I'm counsel for petitioner, 22 Do you see that? 23 Nalox-1 Pharmaceuticals, LLC. 23 Yes. Let's turn to Exhibit 2300, your 24 MR. KRINSKY: And I'd just like to Supplemental Declaration, just the cover page, note, you only have part of the paragraph on the 7 page 1. screen. I just wanted to make sure Dr. Jones knew 1 2 And this is the declaration that you that he could ask Martin to put up what he needs to 3 submitted for the '747 patent. put up if he'd like to look at something else. 4 Do you see that? BY MR. BERMAN: 4 5 Yes. 5 Do you agree with Dr. Donovan's A. 6 Q. And my understanding is that you opinion that a POSA would have considered it likely 7 submitted this same substantive declaration in all 7 that the naloxone degradant was an oxidation three IPRs; is that correct? degradant? 9 Yes, I believe they're identical. 9 THE WITNESS: If you could just do --Okay. If we can go to paragraph 12. Martin, I still have to look at the full page, 10 Q. 10 I don't have the page number in front of me. please. (Witness reviews document.) 11 11 Oh, there you go. Good. 12 12 Could I just look at the next page of 13 It starts off --13 the document as well, please. (Witness reviews 14 You can just blow up that paragraph. 14 document.) 15 It starts off saying, Dr. Donovan If you can go back to the previous 15 16 limited the analysis in her second declaration to page, please. (Witness reviews document.) 16 17 oxidative degradation of naloxone. 17 And can I have the question? 18 Do you see that? 18 BY MR. BERMAN: 19 Yes. 19 Yes. Do you need me to repeat the A. Q. 20 Q. So sitting here today, you don't know 20 question? Okay. of any mechanism for degradation of naloxone other 21 The question is, do you agree with 21 22 than oxidative degradation, correct? Dr. Donovan's opinion that a POSA would have 22 23 I understand that the degradation of considered it likely that the naloxone degradant 23 naloxone is a complex process, and it can occur by 24 was an oxidation degradant? many different mechanisms. One of those mechanisms 25 The POSA would have read Wyse and A.

8

1 would have understood from Wyse that benzalkonium chloride caused the degradation of naloxone.

3 They would have read Wyse and 4 understood Wyse in the wider context of the literature and understand this was a valid 5

proposition from Wyse's data and what Wyse actually 6 7

said. 8 Wyse identified an additional

degradant of four formulations containing 9

benzalkonium chloride. And, therefore, POSA would 10 have read Wyse and understood that Wyse showed that 11

benzalkonium chloride caused naloxone degradation. 12

The POSA would not need to understand the mechanism by which that would occur because 15 they would have read Wyse and understood Wyse from

what Wyse said and what Wyse did. 16 17

Wyse removed benzalkonium chloride in the formulations after finding it caused

instability in the formulations with respect to

naloxone, and, therefore, the POSA would have

followed Wyse's teaching away from using

benzalkonium chloride in the formulation and would

not go on to think about the mechanism of

24 degradation. 25

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Q. But do you agree with Dr. Donovan's stable. The POSA would not go on to consider the mechanism by which that occurred.

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MR. BERMAN: If we can go to Wyse --4 that's Nalox 1007.

5 MR. KRINSKY: I believe you said Nalox 6 1007.

7 MR. BERMAN: Nalox 1007. That's just the exhibit number. Thanks.

PDF page 22, we're going to look at Example 5 on columns 26 and 27. 10

11 If you could zoom in on where it says 12 Example 5 above where you are a bit. Right there. 13

No. Down. Down. Around line 20.

15 Yes, there you go. That's fine.

16 BY MR. BERMAN:

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17 Okay. So I'm looking at Wyse Example 18 5 and specifically at -- I'm going to just read 19 from a couple of places and then ask you a couple

20 of questions.

21 Around line 29, it says, The

22 formulations were at pH 5.0 to accelerate 23 degradation.

24

Do you see that?

25 Yes. A.

opinion that a POSA would have considered it likely that the naloxone degradant was an oxidation degradant?

MR. KRINSKY: Objection. Asked and answered.

THE WITNESS: The POSA would have read Wyse and understood from Wyse that benzalkonium chloride caused naloxone degradation.

Wyse produced a series of experiments whereby he tested naloxone's compatibility in a series of different intranasal formulations, and he showed from that series of experiments that, indeed, benzalkonium chloride caused naloxone degradation.

He identified an additional naloxone degradation peak in four formulations which contained benzalkonium chloride and went on to state in a number of places in Wyse's patent that benzalkonium chloride caused the degradation of naloxone.

21 The POSA would have read this and read what Wyse did subsequent to defining this finding in that he removed benzalkonium chloride from his subsequent formulation testing and went on to make

an intranasal formulation that was chemically

And then going on -- if you can leave O. that up, and then go on to the next column, 27.

And then just go from the top down to about line 30.

Yep. Perfect.

And here around line 20, it says, Increasing the pH of the solution accelerated the degradation of naloxone HCL resulting in the formation of a major degradant at a relative retention time, RRT, of 0.52. However, it was found that decreasing the pH minimizes the formation of potential oxidative degradants.

Do you see that?

A. Yes.

So in this Example 5 test, Wyse increased the pH of the solution to accelerate the degradation of naloxone, correct?

MR. KRINSKY: Object to the form of the question.

20 THE WITNESS: (Witness reviews 21 document.)

22 Could you reask the question, please? 23 BY MR. BERMAN:

In this example, Wyse increased the pH



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