Page 1 UNITED STATES PATENT AND TRADEMARK OFFICE 1 2 BEFORE THE PATENT TRIAL AND APPEAL BOARD 3 4 MYLAN PHARMACEUTICALS, INC., et al., 5 Petitioners, 6 Case No. IPR2016-01332 -vs-7 Patent 8,822,438 B2 JANSSEN ONCOLOGY, INC., 8 9 Patent Owner. 10 _ 11 12 Videotaped Deposition of: 13 JOHN BANTLE, M.D. Madison, Wisconsin 14 April 24, 2017 15 16 Reported by: Taunia Northouse, RDR, CRR, CRC 17 18 19 20 21 22 Veritext Legal Solutions 23 Mid-Atlantic Region 24 1250 Eye Street NW - Suite 350 25 Washington, D.C. 20005

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1 INDEX	Page 1 APPEARANCES CONTINUED
2 WITNESS Page(s)	
3 JOHN BANTLE, M.D.	2 TODD L. KRAUSE, Attorney
· · · · · · · · · · · · · · · · · · ·	SIDLEY AUSTIN, LLP
4 Examination by Mr. Krause 5	3 787 Seventh Avenue, New York, New York 10019
5 Examination by Ms. Greb 127	appearing on behalf of the patent owner.
6	4 tkrause@sidley.com 212-839-5696
7 EXHIBITS	5
8 No. Description Identified	
9 Exh 2180 Copy of Exhibit C to Exhibit 1097 44	Also present: Connie Hansen, videographer
10 Exh 2181 Copy of Exhibit C to Exhibit 1097 55	6
11 Exh 2182Copy of Exhibit C to Exhibit 109758	7 =====================================
12	8
13 (Previously marked exhibits)	9 THE VIDEOGRAPHER: Good mornin
14 Exh 1003Paper by O'Donnell, "Hormonal46	10 We are now on the record. My name is
impact of the 17 alpha-hydroxylase"	11 Connie Hansen. I'm a videographer for
15	12 Golkow Technologies. Today is April 24th,
Exh 1004 Abstract by Glenn Gerber 109	13 2017, and the time is 9 a.m. This video
16	· · · · · · · · · · · · · · · · · · ·
Exh 1005 Patent 5,605,213 118	14 deposition is being held in Madison,
17	15 Wisconsin, in the matter of
Exh 1025 Excerpt from Harrison's Internal 32	16 Mylan Pharmaceuticals, et al., versus
18 Medicine	17 Janssen Oncology, Incorporated. The deponent
19 Exh 1097Dr. Bantle's Declaration6	18 is John Bantle.
20 (Attached to the original transcript	19 If counsel would please identify
and copies provided to all counsel)	20 yourselves and then the court reporter,
21	21 Taunia Northouse, will swear in the witness.
22 REQUESTS Page	22 MR. KRAUSE: Todd Krause of
23 (none)	
24 (Original transcript filed with Attorney Krause,	
copies provided to all counsel)	24 patent owner.
25	25 MS. GREB: Emily Greb of
Page 3	Page
1 DEPOSITION of JOHN BANTLE, M.D., a witness	1 Perkins Coie on behalf of Petitioner Mylan.
2 of lawful age, taken on behalf of the the patent	2 MR. SWANSON: Robert Swanson on
3 owner, wherein Mylan Pharmaceuticals, Inc., is	
4 Petitioner, and Janssen Oncology, Inc., is the patent	3 behalf of Mylan as well from Perkins Coie.
5 owner, before the United States Patent and Trademark	4 MR. HAUER: Ryan Hauer from
6 Office, pursuant to notice, before Taunia Northouse,	
	5 Winston & Strawn for the petitioners.
7 a Registered Diplomate Reporter and Notary Public in	1
8 and for the State of Wisconsin, at the offices of	6
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1	Page 6	1	Page O So when you're tellving shout admed
1	question; okay?		Q So when you're talking about adrenal
	A Yes.	2	insufficiency, you're referring to a deficiency or
3	Q And we have a court reporter taking down your	3	insufficiency of all of the adrenal steroids; is
4	answers to my questions, so please try to give	4	that correct?
5	verbal answers to my questions; okay?		A Well, at least the ones that are necessary for
6	A Yes.	6	health and maintenance of life.
7	Q We'll try to take breaks about every hour or so.		Q And which are those?
8	Please let me know if you need a break. I'll		A Those would principally be the glucocorticoids and
9	finish whatever question I'm on and we can take a	9	the mineralocorticoids.
10	break. Is that understood?		Q And what are the necessary glucocorticoids?
	A Yes.		A The most important is cortisol.
	Q Is there any reason you cannot give complete and		Q And are there others?
13	accurate testimony here today?		A There are other glucocorticoids, but they're
	A No.	14	basically precursors to cortisol, such that they
15	Q I've handed you a document that's been marked as		occur in the process of developing the cortisol
16	Mylan Exhibit 1097. Is this your declaration?	16	molecule, and they're not usually important in
17	A It appears to be, yes.	17	meeting body needs or maintaining normal adrenal
		18	function.
19	declaration?		Q Is it true that other glucocorticoids strike
. .	,	20	that. Is it true that other steroids other than
21	Q Was the declaration marked as Exhibit 1097 an	21	cortisol have glucocorticoid activity?
22	accurate statement of the opinions that you've		A Yes, that is true.
23	reached in this case?		Q And is it true that those steroids contribute to
	A Yes.	24	the glucocorticoid activity in the body?
25	Q Are there any errors in your declaration or	25	A I would have to qualify my yes and say that I
1	Page 7 A None of which I'm aware.	1	Pag don't think they usually do because they're not
	Q Okay. Doctor, we'll be talking a lot about a	2	produced in significant amounts. They're simply
2	person of ordinary skill in the art today. When I	3	precursors to cortisol.
4	refer to person of ordinary skill in the art today. When I	-	Q How is adrenal insufficiency diagnosed?
5	POSA, P-O-S-A, I'm referring to a person as you've		A Well, the definitive test would be something
6	defined it in your expert report. Is that	6	called ACTH stimulation test referred to in this
7	understood?	7	document as a Synacthen test.
	A Yes.		Q If a person of ordinary skill in the art wanted to
9	Q And when we talk about the person's knowledge, it	9	determine whether a patient had adrenal
10	refers to that person's knowledge as of	10	insufficiency, what test or tests would that
10	August 25th, 2006. Is that also understood?	11	physician want to do?
	A Yes.		A Well, if one wanted to definitively make the
12	Q Your report uses the terms adrenal insufficiency,	12	diagnosis, one would do the Synacthen test.
13	low adrenal reserve, and mineralocorticoid excess.	14	
14	What do you mean by adrenal insufficiency?	14	want to perform or have performed?
	A Adrenal insufficiency would be a situation where		A Yes. I think occasionally one might simply
10	the adrenal glands have failed or are in the	17	measure baseline cortisol value, typically first
17	process of failing, where symptoms are produced;	18	thing in the morning when cortisol values are
10	and if diagnosis is not made and treatment	10 19	highest. And if that cortisol value meets the
20	provided, death can ensue.	20	threshold for full adrenal cortisol function, then
20	Q Is it the same as glucocorticoid deficiency?	20	one doesn't need to do the test.
	A No. I would view that as somewhat different.		Q Are there any other tests that a physician would
22 23	With glucocorticoid deficiency one has not enough	22 23	want to do in determining whether a patient has
23 24	of a particular kind of adrenal hormone and may	23 24	adrenal insufficiency?
∠4		24 25	MS. GREB: Objection. Vague as to
25	have adequate amounts of other things.		

Page 10	Page
1 time.	1 the 17-alpha-hydroxylase activity?
2 Q You can go ahead and answer the question.	2 A Hydroxylase at the 17 position on the molecule.
3 A I'm to answer anyway. Definitely the Synacthen	3 Q Okay. And the other is a 1720-lyase activity; is
4 test is the most important. There are other tests	4 that correct?
5 that could be done that might provide insight, but	5 A Yes, cleaves off two carbon atoms from the
6 to make the diagnosis definitively, one would do	6 molecule.
7 the Synacthen test.	7 Q If a person of ordinary skill in the art in 2006
8 Q Is that true today?	8 were concerned about the potential inhibition of
9 A Yes.	9 the CYP17 enzyme and the potential development of
10 Q As it was in August of 2006?	10 adrenal insufficiency in light of that, what test
11 A We call it something different, but yes, that is	11 would that person of ordinary skill want to
12 true today.	12 perform to determine whether or not the patient
13 Q Fair enough. To a person of ordinary skill in the	13 had adrenal insufficiency or was developing
14 art in 2006, would patients' symptoms play any	14 adrenal insufficiency?
15 role in the diagnosis of adrenal insufficiency?	15 A Synacthen test would be I think the definitive
16 A Yes. Typically symptoms might be the first clue	16 test.
17 to testing for the condition. Although I think	17 MS. GREB: Objection. Vague. And
18 it's important to say the symptoms are not very	18 I'd just remind you to give me a second to
19 specific, things like fatigue, which most of us	19 object.
20 have, at least from time to time. So it creates a	20 THE WITNESS: I'm sorry.
21 problem in that the diagnosis is often overlooked	21 MS. GREB: That's okay.
because the symptoms are nonspecific.	22 Q How would a person of ordinary skill in the art
23 Q And do the symptoms become accentuated as the	23 diagnose whether or not a patient had inhibited
24 disease progresses?	24 17-alpha-hydroxylase activity?
25 A Yes. As the disease progresses, more symptoms	25 MS. GREB: Objection. Vague.
Page 11	Page
 appear and definitely would indicate something is wrong and would, I think, cause a doctor who has 	 A Well, the Synacthen test would give information as to whether or not cortisol production remained
3 insight and competence to begin to wonder about	a adequate, and if there was inhibition of an
 adrenal insufficiency as the cause of the 	adequate, and if there was initiation of anenzyme, it should not be adequate. And then
symptoms. But because the symptoms are so	someone might look for other things that might be
6 nonspecific, the diagnosis is often overlooked.	6 abnormal, like low DHEA or low androstenedione.
7 Q How would a person of ordinary skill in the art in	
8 2006 diagnose a patient if they were concerned	7 Q When you say one might, would that be part of wha8 a physician in your view, a person of ordinary
about CYP17 inhibition?	9 skill in the art, would do in his or her
10 MS. GREB: Objection. Vague.	10 diagnosis?
11 A Yes. Can you restate that?	11 A I think it's hard to say for sure what one might
12 Q Sure. Well, let's back up a little bit. Have you	12 do. It's such an uncommon situation that most
12 Q Sure. Wen, let's back up a little bit. Have you 13 heard the term CYP17?	add. It's such an uncommon situation that mostendocrinologists will never encounter it in their
14 A Yes.	14 career, but I think that would be what I would do.
15 Q And what is CYP17?	15 Q But is it fair to say you don't know what a person
16 A CYP17 is the short name for 17-alpha-hydroxylase,	16 of ordinary skill in the art would do?
17 1720-lyase, L-Y-A-S-E, which is an enzyme that's	17 MS. GREB: Objection. Misstates
 important in cortisol production by the adrenal 	18 prior testimony.
19 glands and also important in the production of	19 A Should I still answer?
20 adrenal and testicular androgens.	20 Q Yeah. You can go ahead and answer.
21 Q And so CYP17 is an enzyme; is that correct?	21 A Yes. I think I think so.
	22 Q And how would a person of ordinary skill in the
22 A Yes	
22 A Yes.23 O And that enzyme has two activities: is that right?	23 art diagnose a patient if she or he were concerned
23 Q And that enzyme has two activities; is that right?	art diagnose a patient if she or he were concernedthat that patient had an inhibited 17-lyase
	 art diagnose a patient if she or he were concerned that that patient had an inhibited 17-lyase activity 1720-lyase activity?

Page 14	Page
1 MS. GREB: Objection. Vague.	1 a cortisol value in the Synacthen test that does
2 A An isolated defect in the lyase?	2 not meet the threshold for normal.
3 Q Yes, Doctor.	3 Q And what is the threshold for normal in your view?
4 A I think one would still want to do the Synacthen	4 MS. GREB: Objection. Vague as to
5 test to confirm cortisol production is normal.	5 time.
6 And then one would want to measure DHEA,	6 A It would be 500 nanomoles per liter or
7 androstenedione, A-N-D-R-O-S-T-E-N-E-D-I-O-N-E,	7 18 micrograms per deciliter, depending on which
8 and in a man testosterone.	8 measure you would like to use.
9 Q Is it true that just because a patient has a low	9 Q Would a person of ordinary skill in the art
10 cortisol level, that does not mean that they have	10 believe that is the threshold for normal?
11 adrenal insufficiency?	11 A Well, there's some debate about what normal is.
12 MS. GREB: Objection. Incomplete	12 And the literature would suggest there is some
13 hypothetical.	13 wiggle in that threshold. Some people say it
14 A If they have a low cortisol after a Synacthen	14 needs to be 20 micrograms per deciliter based on
15 stimulation test, they have adrenal insufficiency.	15 data in the literature. Others say 18 is
16 Q If one were just looking at the cortisol level	16 sufficient. But it's approximately the same.
17 A Yes.	17 Q What are the symptoms of low adrenal reserve?
18 Q would the cortisol would a low cortisol	18 A The symptoms of low adrenal reserve may be none.
19 level alone mean that a patient has adrenal	19 In other instances there might be fairly
20 insufficiency?	20 nonspecific symptoms like fatigue, poor appetite,
21 A If it is low after Synacthen administration, in my	21 lack of energy, and stamina.
22 opinion, yes.	22 Q And why would a person of ordinary skill in the
23 Q And your declaration also refers to low adrenal	23 art believe low adrenal reserve could be an issue
reserve. What is low adrenal reserve?	24 for patients?
25 A Low adrenal reserve might be considered the	25 A A low adrenal reserve would be an important issue
Page 15 1 forerunner to adrenal insufficiency where adrenal	Page 1 because that individual will probably do fine in
 2 function is partially compromised but not yet 	2 day-to-day life as long as nothing stressful
3 fully compromised such that a person might be able	a happens. But should that person become ill, say
4 to meet basic cortisol production needs but could	4 develop pneumonia or some significant illness, or
 not augment cortisol production at times of great 	 should that person require surgery, perhaps urgent
6 stress.	 6 surgery, they could quickly decompensate because
8 probably not a good idea in this proceeding, but I	8 augment cortisol production as would be necessary
9 can't help myself in this case to say low adrenal	9 to meet the stress.
10 reserve might be like a car whose engine is not	10 Q What illnesses could lead to a decompensation with
working properly and can only go 30 miles an hour.	11 respect to low adrenal reserve?
12 You can get around town okay in that car, but take	12 A All sorts of illnesses. The more serious the
it out on the freeway and you're likely to have	13 illness, the more likely the patient would be
14 trouble.	14 compromised. Pneumonia, as I previously
15 Q And how is low adrenal reserve diagnosed?	15 mentioned, would be one that comes immediately to
16 A It would usually be diagnosed by the Synacthen	16 mind. Any sort of infectious process would
17 test.	17 potentially put the person at risk. Numerous
18 Q Are there any other methods a person of ordinary	18 other medical conditions that provide major stress
19 skill in the art would use in determining	19 for the body would potentially lead to
20 definitively whether or not a patient had low	20 decompensation.
21 adrenal reserve?	21 Q To your knowledge, does metastatic resistant
22 A No, I don't think so.	22 (Reporter interrupts)
·	22. O To your lenguiladay, daga matastatia registant
23 Q And when you refer to low adrenal reserve, how do	23 Q To your knowledge, does metastatic resistant
	24 I'm sorry, let me start that again. To your

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