

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

TARO PHARMACEUTICALS U.S.A.,	)	
INC.,	)	
	)	
Petitioner,	)	
	)	Case No.
vs.	)	IPR2017-01446
	)	Volume I
APOTEX TECHNOLOGIES, INC.,	)	
	)	
Patent Owner.	)	
_____	)	

VIDEOTAPED DEPOSITION OF THOMAS D. COATES, M.D.

Los Angeles, California

Thursday, April 26, 2018

Reported by:  
ELIZABETH BORRELLI, CSR No. 7844, RPR  
JOB NO. 43130

<p style="text-align: right;">2</p> <p>1 UNITED STATES PATENT AND TRADEMARK OFFICE 2 BEFORE THE PATENT TRIAL AND APPEAL BOARD 3 4 TARO PHARMACEUTICALS U.S.A., ) 5 INC., ) 6 ) 7 Petitioner, ) 8 ) Case No. 9 vs. ) IPR2017-01446 10 vs. ) 11 ) Volume 12 APOTEX TECHNOLOGIES, INC., ) 13 ) Pages 1 to 239 14 Patent Owner. ) 15 16 17 Videotaped Deposition of THOMAS D. COATES, 18 M.D., Volume I, taken on behalf of the 19 Petitioner, at 601 South Figueroa Street, 41st 20 Floor, Los Angeles, California, commencing at 21 9:07 a.m., Thursday, April 26, 2018, before 22 Elizabeth Borrelli, a Certified Shorthand 23 Reporter in the State of California, License 24 No. 7844. 25 * * *</p>	<p style="text-align: right;">4</p> <p>1 APPEARANCES OF COUNSEL (continued): 2 3 For the Patent Owner: 4 COZEN O'CONNOR 5 BY: BARRY GOLOB 6 BY: W. BLAKE COBLENTZ 7 Attorneys at Law 8 1200 Nineteenth Street NW 9 Washington, DC 20036 10 (202) 912-4815 (direct) 11 (202) 912-4837 (direct) 12 bgolob@cozen.com 13 wcoblentz@cozen.com 14 15 Also Present: 16 DAVID KIM, Videographer 17 18 19 20 21 22 23 24 25</p>
<p style="text-align: right;">3</p> <p>1 APPEARANCES OF COUNSEL: 2 3 For the Petitioner: 4 GOODWIN PROCTER LLP 5 BY: HUIYA WU 6 BY: CHRISTOPHER J. MORTEN 7 Attorneys at Law 8 The New York Times Building 9 620 Eighth Avenue 10 New York, New York 10018 11 (212) 459-7270 12 (212) 459-7114 13 hwu@goodwinlaw.com 14 cmorten@goodwinlaw.com 15 16 17 18 19 20 21 22 23 24 25</p>	<p style="text-align: right;">5</p> <p>1 INDEX 2 WITNESS EXAMINATION 3 THOMAS D. COATES, M.D. 4 By MS. WU 9, 228 5 By MR. COBLENTZ 224 6 7 8 9 REFERENCED EXHIBITS 10 11 EXHIBIT DESCRIPTION PAGE 12 Exhibit 2002 Curriculum Vitae of Thomas 13 Coates, M.D., 70 pages 14 15 Exhibit 2001 Document titled "Declaration of 16 Thomas D. Coates, M.D. in 17 Support of Patent Owner's 18 Preliminary Response," 41 pages 19 Exhibit 2015 Document titled "Cardiovascular 20 T2-star (T2*) magnetic 21 resonance for the early 22 diagnosis of myocardial iron 23 overload," 40 pages 24 Exhibit 1022 Document titled "Oral Iron 25 Chelation with Deferiprone," 30 pages Exhibit 1001 U.S. Patent 7,049,328 B2, 18 61 pages Exhibit 1021 U.K. Patent GB 2 118 176 B, 22 64 pages</p>

6	<p>1 Exhibit 2035 Document titled "Second Declaration of Thomas D. Coates, M.D. in Support of Patent Owner's Response," 21 pages 75</p> <p>2</p> <p>3</p> <p>4 Exhibit 1007 Document titled "Long-Term Trial of Deferiprone in 51 Transfusion-Dependent Iron Overloaded Patients," 6 pages 87</p> <p>5</p> <p>6</p> <p>7 Exhibit 2011 Document titled "Long-Term Safety and Effectiveness of Iron-Chelation Therapy with Deferiprone for Thalassemia Major," 7 pages 115</p> <p>8</p> <p>9</p> <p>10 Exhibit 2016 Document titled "Comparison of effects of oral Deferiprone and subcutaneous desferrioxamine on myocardial iron concentrations and ventricular function in beta-thalassemia," 5 pages 121</p> <p>11</p> <p>12</p> <p>13 Exhibit 2022 Document titled "Lack of correlation between iron overload cardiac dysfunction and needle liver biopsy iron concentration," 2 pages 130</p> <p>14</p> <p>15</p> <p>16 Exhibit 2003 Document titled "Declaration of Dudley Pennell, M.D. in Support of Patent Owner's Preliminary Response," 47 pages 133</p> <p>17</p> <p>18</p> <p>19 Exhibit 2026 Document titled "Second Declaration of Dudley J. Pennell, M.D. in Support of Patent Owner's Response," 16 pages 133</p> <p>20</p> <p>21</p> <p>22 Exhibit 1012 Document titled "Iron-Chelation Therapy with Oral Deferiprone in Patients with Thalassemia Major," 5 pages 139</p> <p>23</p> <p>24 Exhibit 1010 Olivieri 1995 abstract, 12 pages 201</p> <p>25</p>	8	<p>1 LOS ANGELES, CALIFORNIA; THURSDAY, APRIL 26, 2018</p> <p>2 9:07 A.M.</p> <p>3</p> <p>4 THE VIDEOGRAPHER: We are now going on the video record. Today is April 26th, 2018 and the time is approximately 9:07 a.m. The location is 601 South Figueroa Street, Los Angeles, California. My name is David Kim. I'm the video specialist representing Henderson Legal Services. The civil action number is IPR2017.01146 in the matter of Taro v. Apotex and the deponent is Dr. Thomas D Coates. The video deposition is requested by Cozen O'Connor. Will counsel please identify themselves for the record.</p> <p>5</p> <p>6 MS. WU: Huiya Wu on behalf of petitioner Taro Pharmaceuticals of Goodwin Procter. With me is Chris Morten.</p> <p>7</p> <p>8 Just one clarification, it's IPR2017-1446.</p> <p>9 THE VIDEOGRAPHER: Okay.</p> <p>10 MR. GOLOB: Barry Golob and Blake Coblentz of Cozen O'Connor for the patent owner, Apotex.</p> <p>11</p> <p>12 THE VIDEOGRAPHER: The deponent may now be sworn in.</p> <p>13</p> <p>14 ///</p> <p>15</p> <p>16 ///</p>
7	<p>1 Exhibit 2014 Document titled "Canadian Scientists Honored for Role in Breakthrough Drug," 6 pages EXHIBITS 219</p> <p>2</p> <p>3</p> <p>4</p> <p>5 COATES PAGE</p> <p>6 Exhibit 1052 U.S. Patent 4,840,958, 9 pages 58</p> <p>7 Exhibit 1053 Document titled "Safety profile of the oral iron chelator Deferiprone: a multicentre study," 8 pages 99</p> <p>8</p> <p>9</p> <p>10 Exhibit 1054 Document titled "Physiology and Pathophysiology of Iron Cardiomyopathy in Thalassemia," 10 pages 205</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	9	<p>1 THOMAS COATES, M.D.,</p> <p>2 having been duly administered</p> <p>3 an oath in accordance with CCP 2094,</p> <p>4 was examined and testified as follows:</p> <p>5</p> <p>6 EXAMINATION</p> <p>7 BY MS. WU:</p> <p>8 Q. Good morning, Dr. Coates.</p> <p>9 A. <b>Good morning.</b></p> <p>10 Q. Could you please state your full name?</p> <p>11 A. <b>Thomas Dwayne Coates.</b></p> <p>12 Q. My name is Huiya Wu and I'll be asking you questions today.</p> <p>13 Have you been deposed before?</p> <p>14 A. <b>Yes.</b></p> <p>15 Q. How many times?</p> <p>16 A. <b>I'm not sure exactly. More than five, less than 20.</b></p> <p>17 Q. When was your most recent deposition?</p> <p>18 A. <b>Again, I don't exactly remember. Within the last three to five years.</b></p> <p>19 Q. So it's been a few years, so let me go --</p> <p>20 A. <b>It's probably been --</b></p> <p>21 Q. -- through some ground rules.</p> <p>22 A. <b>I'm sorry.</b></p> <p>23</p> <p>24</p> <p>25</p>

10	<p>1 Q. First ground rule being I will ask</p> <p>2 questions and you will --</p> <p>3 <b>A. I will listen.</b></p> <p>4 Q. You will give answers, and I ask that you</p> <p>5 let me finish my question before you give an answer</p> <p>6 so that the court reporter can take down the</p> <p>7 testimony appropriately, okay?</p> <p>8 <b>A. That's fine.</b></p> <p>9 Q. If you don't understand the question,</p> <p>10 please ask me to clarify, and I'll do my best to do</p> <p>11 that, okay?</p> <p>12 <b>A. Yes.</b></p> <p>13 Q. Now, if you answer a question, I will</p> <p>14 assume that you have understood it. Agreed?</p> <p>15 <b>A. Agreed.</b></p> <p>16 Q. If you need a break, please let me know,</p> <p>17 okay? But I will try to take breaks about every</p> <p>18 hour, all right?</p> <p>19 <b>A. Yes.</b></p> <p>20 Q. If there is a question pending, I do ask</p> <p>21 that you answer it before we go on break, okay?</p> <p>22 <b>A. Yes.</b></p> <p>23 Q. Now, is there any reason you cannot give</p> <p>24 complete and accurate testimony today?</p> <p>25 <b>A. No.</b></p>	12
11	<p>1 Q. Let me hand you what's been previously</p> <p>2 marked as Exhibit 2002. Is this your current CV?</p> <p>3 <b>A. I don't -- is there a date on this? I</b></p> <p>4 <b>don't see it.</b></p> <p>5 THE WITNESS: Do we know when this was</p> <p>6 sent?</p> <p>7 MS. WU: I don't.</p> <p>8 THE WITNESS: Okay.</p> <p>9 MR. GOLOB: What was it attached to, so</p> <p>10 you can give him a timeframe?</p> <p>11 MS. WU: I believe this was submitted with</p> <p>12 your first declaration in the IPR proceeding.</p> <p>13 THE WITNESS: Then no, but it's like --</p> <p>14 let me look at the number of publications.</p> <p>15 BY MS. WU:</p> <p>16 Q. And if it helps, your declaration was</p> <p>17 dated September 2017.</p> <p>18 <b>A. December?</b></p> <p>19 MR. GOLOB: September.</p> <p>20 THE WITNESS: September.</p> <p>21 It's -- it's quite close. There's a few</p> <p>22 more publications that -- that are on my most recent</p> <p>23 CV, but they're not -- likely not relevant to this.</p> <p>24 BY MS. WU:</p> <p>25 Q. Are you currently employed by Children's</p>	13
10	<p>1 Hospital of Los Angeles?</p> <p>2 <b>A. Yes.</b></p> <p>3 Q. Is that a leading center for</p> <p>4 transfusion-dependent patients?</p> <p>5 <b>A. Yes.</b></p> <p>6 Q. Since when?</p> <p>7 <b>A. Probably -- probably since the mid- to</b></p> <p>8 <b>early 1990s.</b></p> <p>9 Q. Are there other leading centers for</p> <p>10 transfusion-dependent patients in the US?</p> <p>11 <b>A. Yes.</b></p> <p>12 Q. What are those?</p> <p>13 <b>A. The major centers are us, Oakland</b></p> <p>14 <b>Children's, Chicago, I forget -- I forget what the</b></p> <p>15 <b>name of it. Everybody is changing their names these</b></p> <p>16 <b>days when people give money to the universities, but</b></p> <p>17 <b>Alexis Thompson at Chicago, Children's Hospital of</b></p> <p>18 <b>Philadelphia, Atlanta Children's Hospital, Cornell</b></p> <p>19 <b>University. Those are the major institutions.</b></p> <p>20 <b>There are some other ones that are also good.</b></p> <p>21 Q. Where these centers also leading centers</p> <p>22 in -- since the mid-1990s?</p> <p>23 <b>A. Yes. Perhaps not Chicago or Atlanta.</b></p> <p>24 Q. Oakland Children's Hospital, Philadelphia</p> <p>25 and Cornell were leading centers for</p>	13
11	<p>1 transfusion-dependent patients since the mid-1990s?</p> <p>2 <b>A. Yes.</b></p> <p>3 Q. Are you aware of any societies for</p> <p>4 hematologists who treat transfusion-dependent</p> <p>5 patients?</p> <p>6 <b>A. Yes.</b></p> <p>7 Q. What are the leading societies for</p> <p>8 hematologists who treat transfusion-dependent</p> <p>9 patients?</p> <p>10 <b>A. Well, the major society is the American</b></p> <p>11 <b>Society for Hematology.</b></p> <p>12 Q. Any others?</p> <p>13 <b>A. Well, European Hematology, EHA, European</b></p> <p>14 <b>Hematology Association; TIF, Thalassemia</b></p> <p>15 <b>International --</b></p> <p>16 <b>[Reporter requests clarification.]</b></p> <p>17 THE WITNESS: Thalassemia International</p> <p>18 Federation, American Society for Pediatric</p> <p>19 Hematology Oncology --</p> <p>20 <b>[Reporter requests clarification.]</b></p> <p>21 THE WITNESS: American Society for</p> <p>22 Pediatric Hematology Oncology, and I'm -- I'm sure</p> <p>23 that there are some other similar groups in Europe</p> <p>24 and Italy and Greece whose names I can't pronounce</p> <p>25 or remember.</p>	13

14	<p>1 BY MS. WU:</p> <p>2 Q. Are you a member of any of these</p> <p>3 societies?</p> <p>4 <b>A. Yes, I am.</b></p> <p>5 Q. Which ones?</p> <p>6 <b>A. American Society for Hematology, European</b></p> <p>7 <b>Hematologic Association, American Society of</b></p> <p>8 <b>Pediatric Hematology and Oncology.</b></p> <p>9 Q. Do these societies have meetings?</p> <p>10 <b>A. Yes, they do.</b></p> <p>11 Q. Do you attend them?</p> <p>12 <b>A. Yes.</b></p> <p>13 Q. Since when have you been attending</p> <p>14 meetings for the American Society of Hematology?</p> <p>15 <b>A. My first meeting was probably in 1981,</b></p> <p>16 <b>1982.</b></p> <p>17 Q. Is it a yearly meeting?</p> <p>18 <b>A. Yes.</b></p> <p>19 Q. Did you spend any time preparing for this</p> <p>20 deposition?</p> <p>21 <b>A. Yes.</b></p> <p>22 Q. About how long?</p> <p>23 <b>A. Well, specifically for the deposition</b></p> <p>24 <b>itself, probably 10 to 20 hours.</b></p> <p>25 Q. Did you review your declaration submitted</p>	16
15	<p>1 to the PTAB?</p> <p>2 MR. GOLOB: You can answer "yes" or "no."</p> <p>3 only.</p> <p>4 THE WITNESS: Yes.</p> <p>5 BY MS. WU:</p> <p>6 Q. Do you understand what I'm referring to</p> <p>7 when I say "PTAB"?</p> <p>8 <b>A. That, I believe was the -- the patent</b></p> <p>9 <b>office response. Thank you for asking. These terms</b></p> <p>10 <b>are a little bit unclear, but yes.</b></p> <p>11 Q. And you recall you had two declarations</p> <p>12 that you submitted --</p> <p>13 <b>A. Yes.</b></p> <p>14 Q. -- to the PTAB?</p> <p>15 <b>A. I recall I had two declarations, yes.</b></p> <p>16 Q. In reviewing your declarations, do you</p> <p>17 have any corrections or updates?</p> <p>18 <b>A. Well, there is one word, I believe, in the</b></p> <p>19 <b>first declaration where we said that we developed an</b></p> <p>20 <b>MRI technology, and the word "developed" should</b></p> <p>21 <b>probably be "implemented and expanded upon the</b></p> <p>22 <b>technology developed by Dr. Pennell." It's a minor</b></p> <p>23 <b>difference, but that's the only thing.</b></p> <p>24 Q. So let's take a look at that, your first</p> <p>25 declaration.</p>	17
14	<p>1 MS. WU: Handing you Exhibit 2001.</p> <p>2 BY MS. WU:</p> <p>3 Q. This is your first declaration, right?</p> <p>4 <b>A. Yes. Now, I'm not sure I'll be able to</b></p> <p>5 <b>find this right away.</b></p> <p>6 MR. GOLOB: She will ask a question if she</p> <p>7 wants to. Don't worry.</p> <p>8 BY MS. WU:</p> <p>9 Q. At the paragraph 4 on page 2 --</p> <p>10 <b>A. Yes.</b></p> <p>11 Q. -- do you see, right, "I am a pediatric</p> <p>12 cardiologist/MRI engineer developed" --</p> <p>13 <b>A. Yes.</b></p> <p>14 Q. -- "the technology to measure tissue iron</p> <p>15 by MRI"?</p> <p>16 <b>A. Yes, I see that.</b></p> <p>17 Q. Is that the sentence in which you would</p> <p>18 like to make a correction to the word "developed"?</p> <p>19 <b>A. Yes.</b></p> <p>20 Q. Who is the pediatric cardiologist/MRI</p> <p>21 engineer you refer to there?</p> <p>22 <b>A. Dr. John Wood.</b></p> <p>23 Q. And are you making this distinction</p> <p>24 because Dr. Pennell, and not you and Dr. Wood,</p> <p>25 developed the MRI technology discussed?</p>	17

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