IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

TAKEDA PHARMACEUTICAL COMPANY, LTD., and TAP PHARMACEUTICAL PRODUCTS INC., Plaintiffs and Counterclaim-Defendants, v. TEVA PHARMACEUTICALS USA, INC., and TEVA PHARMACEUTICAL INDUSTRIES LTD., Defendants and Counterclaim-Plaintiffs.	)	C.A. No. 06-033 (SLR)

PLAINTIFFS TAKEDA'S AND TAP'S POST-TRIAL REPLY BRIEF

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I. PRELIMINARY STATEMENT

Takeda scientists solved the problem of lansoprazole's instability with the invention claimed in the '321 Patent. Claim 2 of the '321 Patent teaches how to stabilize lansoprazole by placing it "in contact … evenly" with the basic inorganic salt magnesium carbonate. It is undisputed that Teva's proposed 15 mg and 30 mg lansoprazole products contain the basic inorganic salt magnesium carbonate as required by claim 2 of the '321 Patent. It is further undisputed that, despite Teva's best efforts, Teva failed to design a stable lansoprazole formulation without magnesium carbonate. Plaintiffs' expert, Dr. Byrn, offers the only explanation why: Teva's magnesium carbonate, using the water inherent in Teva's products, creates a uniformly basic microenvironment around the lansoprazole that neutralizes any acids before they reach the lansoprazole and cause it to degrade. Thus, Teva could not create a uniform basic microenvironment that could stabilize lansoprazole without the use of magnesium carbonate in contact with the lansoprazole evenly. In other words, Teva could not stabilize its formulation without practicing claim 2 of the '321 Patent.

Teva's brief fails to offer *any* theory as to how its lansoprazole products achieve stability without practicing the '321 Patent. Instead, Teva's brief offers three principal non-infringement arguments: (1) the claim term "in contact … evenly" requires "physical, homogenous mixing"; (2) both Parties' 800 Raman and EDX tests fail to show mixing or contact between lansoprazole and magnesium carbonate; and (3) even if both Parties' tests show mixing, Plaintiffs have not quantified the amount of contact between lansoprazole and magnesium carbonate "in any given

area of Teva's ANDA product." Teva's Opp. Br.[1] at 1-4. None of these arguments withstands scrutiny.

Teva's first non-infringement theory—that limits "in contact … evenly" to "physical, homogenous mixing"—should be rejected. The '321 Patent expressly distinguishes the physical relationship of being "in contact … evenly" from the process of "homogeneous mixing." In fact, the claim does not require homogenous mixing at all to be "in contact … evenly." Indeed, Teva concedes that it is not necessary that "all of the lansoprazole must be touching all of the magnesium carbonate for there to be a homogenous mixture."[2] Teva's Opp. Br. at 15. Likewise, Teva's emphasis on "physical contact" in the claim is also misplaced. Nothing in the patent or its prosecution history limits "contact" to "physical contact." If anything, Teva's attempt to introduce the modifier "physical" to limit "mixing" or "contact" strongly suggests that contact may have a broader meaning than that ascribed to it by Teva—extending to non-physical contact or contact mediated through water.

In its second non-infringement theory, Teva contends that the Parties' testing does not establish mixing of lansoprazole and magnesium carbonate in Teva's products. Teva previously argued that a thin, impermeable talc layer in its products physically separates lansoprazole from magnesium carbonate. *See* Teva's Opening Claim Construction Brief (D.I. 131) at 4. *See also id.* at 2 (where Teva asserted that "in Teva's product, the benzimidazole compound and the basic organic salt are not in contact at all."). Even at trial, Teva argued that its "layers" acted like

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[1] Answering Post-Trial Brief of Defendants Teva Pharmaceuticals USA, Inc. and Teva Pharmaceutical Industries Ltd. Regarding Noninfringement of the '321 Patent (D.I. 174), hereinafter "Teva's Opp. Br."

[2] Plaintiffs' Raman and EDX results do show significant touching between lansoprazole and magnesium carbonate. If this significant touching is all Teva requires for infringement, then Teva has conceded infringement.

Saran Wrap and prevented the mixing of components between "layers." Teva's brief is an about-face—Teva now contends that it that never took the position that its layers were impermeable. Instead, Teva argues that the talc barrier does not have to be "'impermeable' to form an effective separating barrier." Teva's Opp. Br at 25-26.

Teva's ever-changing position aside, the Parties' Raman and EDX tests show that the so-called talc layer is not "impermeable" or an "effective separating barrier." Collectively, 800 Raman and EDX spectra show contact and mixing of lansoprazole and magnesium carbonate in Teva's products. Even Teva's expert Dr. Chambliss admitted that the tests demonstrate magnesium carbonate and lansoprazole in contact. Tr. 533:9-21 (Chambliss Cross). Nevertheless, Teva continues to rely on its ToF-SIMS data as proof of non-infringement. But ToF-SIMS cannot distinguish magnesium carbonate from the talc in Teva's product and cannot observe contact between lansoprazole and magnesium carbonate below the granule surface. Simply stated, Teva relies on the wrong test.

Finally, Teva complains that Plaintiffs offer no quantitative proof of the contact between lansoprazole and magnesium carbonate in its products. But none of Teva's experts, at any time, has (1) required that contact within a given area of Teva's products should be quantitatively measured, (2) provided a numerical limit for the amount of contact, or (3) suggested a unit of measure to measure "contact." In fact, the only quantitative measure for determining the amount of contact between lansoprazole and magnesium carbonate in the '321 Patent is the content uniformity test referenced during prosecution of the '321 Patent, and Teva's products indisputably meet that requirement.

Teva also asserts non-infringement based on three other claim limitations, but each limitation incorporates Teva's erroneous "in contact … evenly" claim construction, even though

these limitations refer neither to "contact" or "evenly." Teva incorporates its erroneous "contact … evenly" claim construction into these limitations in support of its non-infringement position. Nevertheless, Teva's experts admit that, under ordinary constructions, each of these terms reads on Teva's products.

In sum, Teva's ever-shifting arguments cannot overcome the overwhelming evidence showing that the magnesium carbonate in Teva's products stabilizes the lansoprazole by practicing the '321 Patent invention.

II. TEVA'S "HOMOGENOUS MIXING" PROCESS INTERPRETATION SHOULD NOT BE IMPORTED INTO CLAIM 2

Since the lansoprazole and magnesium carbonate in its products are in contact evenly, and thus its products infringe the '321 Patent, Teva tries to rewrite claim 2 to require a new element—*i.e.*, a specific method of manufacture. Teva asserts that to infringe claim 2, it is not enough that the lansoprazole and magnesium carbonate be in contact evenly; according to Teva, they must *also* have been physically mixed together homogenously. Teva tries to deny that it is seeking to import a process requirement into claim 2, but its own words indicate otherwise: Teva titles the claim construction section of its brief "Claim Construction: 'In Contact … Evenly' Requires Physical Homogenous Mixing." Teva's Opp. Br. at 8. Moreover, Teva's own expert testified that the Patent requires the lansoprazole and the magnesium carbonate to be run through a "blender." Tr. 524:24-525:8; 525:19-25 (Chambliss Cross).[3] As explained in Plaintiffs' Opening Brief, D.I. 163, "[c]ourts must generally take care to avoid reading process limitations into an apparatus claim, … because the process by which a product is made is irrelevant to the

[3] Teva's answering brief also repeats various arguments that Teva made in its claim construction briefs. Plaintiffs have already responded to these arguments in their claim construction briefs, D.I. 133 and 141, and will not repeat those arguments here.

question of whether that product infringes a pure apparatus claim." *Baldwin Graphic Sys., Inc. v. Siebert, Inc.*, --F.3d--, 2008 WL 124149, at *6 (Fed. Cir. Jan. 15, 2008).

The '321 Patent expressly distinguishes between the structure of the claimed composition and the process used to make the composition. Even the sentence Teva relies on supports this distinction: "The composition of the invention *is prepared* by homogeneously admixing the above benzimidazole compound, the basic inorganic salt of magnesium … and the … additives." PTX 3, '321 Patent, 9:45-48 (italics added). The use of "prepared by" demonstrates that homogeneous admixing is a process used to make the composition. The '321 Patent also teaches that another method of making the claimed composition is simply adding magnesium carbonate to an already prepared mixture of lansoprazole and excipients. Pls.' Opening Br. (D.I. 163) at 5, *quoting* PTX 3, 9:60-66. Thus, the '321 Patent distinguishes the process of homogeneous admixing from the structure of being "in contact … evenly."

Ultimately, Teva's assertion that the '321 Patent requires homogenous mixing or perfect blending of lansoprazole and magnesium carbonate flies in the face of the plain language of claim 2. The inventors knew how to say "homogeneous mixing," since they used the term in the patent specification, and they would have known how to say that one had to blend together the lansoprazole and magnesium carbonate. The inventors chose not to include these terms in the claims, and chose during prosecution instead to add the term "in contact … evenly." PTX 4 (claim 19, at Takeda 739670-671). Moreover, the statement in the '321 Patent specification that one can practice the patented invention merely by "adding" magnesium carbonate to the lansoprazole directly refutes Teva's argument that the lansoprazole and magnesium carbonate must be "blended" together. As explained in greater detail in Plaintiffs' Claim Construction and Post-Trial briefs, D.I. 133, 141, 163, the fact that the '321 Patent specification uses two different

phrases for "in contact … evenly" and "homogeneous admixing" supports Plaintiffs' position that those phrases have different meanings. *Acumed LLC v. Stryker Corp.*, 483 F. 3d 800, 807 (Fed. Cir. 2007). The '321 Patent's prosecution history similarly emphasizes the structural limitation "in contact … evenly," not the process limitation of "homogeneous admixing." PTX 4 (claim 19, at Takeda 739670-671). Further, in differentiating the claims from the prior art, the inventors emphasized that the magnesium carbonate was "in contact … evenly" with the lansoprazole, thereby stabilizing the lansoprazole. In fact, the inventors never used the term "homogeneous [nor homogenous] admixture" in the key portion of the prosecution history Teva relies upon:

> However, the [Rainer] reference makes no comment or suggestion on ***stabilization of the benzimidazole compounds*** by ***contacting with*** magnesium aluminate or any other ***basic inorganic salt of magnesium*** and calcium ***evenly***….

PTX 4, Amendment, at Takeda 739674 (emphasis added).

Teva attempts to defend its position that "homogenous admixing" should be imported into the construction of product claim 2 by contending the inventors made statements that redefined "contact … evenly" and limited it to a homogenous mixing process. But to limit claim scope in this way, as Teva contends, the inventors would have been required to make statements that are "clear and unmistakable" assertions disavowing claim scope. *Baldwin Graphic*, 2008 WL 12149, at *8. The '321 Patent inventors' statements merely described structural differences over the prior art—they did not distinguish the prior art based on homogenous or homogeneous admixing. *See Purdue Pharma L.P. v. Endo Pharm., Inc.*, 438 F.3d 1123, 1136 (Fed. Cir. 2006) ("While it is true that Purdue relied on its 'discovery' of the four-fold dosage range to distinguish its claimed oxycodone formulations from other prior art opioids, Purdue's statements do not amount to a clear disavowal of claim scope.").

The Federal Circuit rarely finds the required clear and unmistakable disclaimer that limits a product to a particular process of manufacture. Even in the case Teva relies upon, *AFG Indus. Inc. v. Cardinal IG Co.*, the Federal Circuit initially held that the claims were not limited to a particular process. *AFG Indus., Inc. v. Cardinal IG Co.*, 375 F.3d 1367, 1373 (Fed. Cir. 2004) ("In sum, the determination of whether a particular structure is a 'layer' within the meaning of the claim is not affected by the method of creation of that structure."). The Federal Circuit later reversed its holding only because the patentee had inconsistently relied on a process limitation to argue successfully during the litigation that its patent was valid. *AFG Indus. Inc. v. Cardinal IG Co.*, 224 F. App'x 956, 958-59 (Fed. Cir. 2007) ("[The patentee's process limitation] was the basis of the district court's ruling that the '532 product is not obvious or anticipated by the Goodman reference."). In contrast, Plaintiffs never contended to this Court that differences in manufacturing process had any significance in distinguishing between the prior art and claim 2.

Teva's new argument that the intrinsic record fails to support the "uniform basic environment" interpretation of "in contact … evenly" is similarly flawed. Teva's Opp. Br. at 16-17. Teva's assertion that the patent specification teaches away from a moist environment ignores the explicit teaching that the compositions of the '321 Patent contain moisture:[4]

> The ***moisture*** amount in the composition is ***preferably*** about ***6-60%***, more ***preferably*** about ***20-40%*** as equilibrium relative humidity. (E.R.H.)

PTX 3 ('321 Patent, col. 9, ll. 54-56) (emphasis added); *see also* Tr. 90:1-91:10 (Byrn). The '321 Patent also describes the importance of pH in a moist environment:

> It is only required of such basic inorganic magnesium and calcium salts to show basicity (pH of not less than 7) when they are in the form of a 1% aqueous solution or suspension.

[4] The '321 Patent teaches that unstabilized lansoprazole is sensitive to moisture. The invention described in the '321 Patent uses a basic inorganic salt together with moisture to stabilize lansoprazole. This demonstrates the nonobviousness of the invention.

PTX 3 ('321 Patent, col. 9, ll. 21-24).

Teva also ignores Dr. Byrn's testimony that in his 35 years working with pharmaceuticals, he has never seen a single case where a drying step removed all the water from the system. Tr. 160:16-19 (Byrn Cross). Instead, Teva cites the routine drying steps used to prepare the compositions of the '321 Patent. *See* Teva's Opp. Br. at 16-17. But the '321 Patent expressly teaches that significant moisture exists in claimed compositions even after routine drying steps have been used during manufacture.

Claim 2 is undisputedly a product claim. The inventors did not make a "clear and unmistakable" disavowal that product claim 2 is limited by processes used in the '321 Patent's examples.

III. TEVA'S "PHYSICAL CONTACT" INTERPRETATION SHOULD NOT BE IMPORTED INTO CLAIM 2

Teva argues that Plaintiffs' claim construction fails because it requires "no physical contact" at all between the lansoprazole and magnesium carbonate. Teva's Opp. Br. at 2. This is incorrect. Plaintiffs' construction of "in contact … evenly" requires a *mixture* of lansoprazole and magnesium carbonate, just like Teva's. As explained by Dr. Byrn at trial, the fact that the lansoprazole and magnesium carbonate are in a *mixture* means that the substances will be in physical contact, as well as other forms of contact. Tr. 117:13-118:7 (Byrn). And Plaintiffs have proven that there is physical contact between lansoprazole and magnesium carbonate in Teva's products. Moreover, Plaintiffs' Raman and EDX results show that magnesium carbonate is in close physical contact with lansoprazole throughout the Teva granules. Tr. 126:4-127:9 (Byrn), Tr. 229:10-19, 233:10-20 (Bugay).

At trial, Plaintiffs proved that in the mixtures described in the '321 Patent, some lansoprazole will have little or no physical contact at all with the magnesium carbonate.

Tr. 97:18-99:9 (Byrn). Even Teva admits in its brief that "not all of the lansoprazole must be touching all of the magnesium carbonate for there to be a homogenous mixture." Teva's Opp. Br. at 15. Yet, as taught in the '321 Patent, even if some lansoprazole has limited or no contact with magnesium carbonate, all the lansoprazole is stabilized by—and in contact with—the magnesium carbonate through the uniformly basic environment. Dr. Byrn's testimony and evidence about the term "in contact … evenly" convincingly demonstrated that "contact" encompasses more than just physical contact. Tr. 97:10-100:15 (Byrn).

Even Teva recognizes that "contact" encompasses more than mere physical contact—it adds the modifier "physical" to "contact." Teva's Opp. Br. at 1. Yet Teva points to no portion of the specification or prosecution history to support its "physical contact" limitation. *Compare Power Mosfet Techs., L.L.C. v. Siemens AG*, 378 F.3d 1396, 1409 (Fed. Cir. 2004) ("While **the 'contacting' requirement may be satisfied with either physical or electrical contact**, we do not see how electrical contact alone can form the 'necessarily physical' junction required for the interface.") (emphasis added).

Plaintiffs' claim construction properly relies on the '321 Patent and its file history, dictionary definitions, analogies, and the understanding of persons skilled in the art to support their construction. Teva does not directly refute the dictionary or analogies, but instead, baldly contends that it is wrong as a matter of law to rely on such sources. In fact, the Federal Circuit continues to rely on dictionaries to support its constructions. *Verizon Services Corp. v. Vonage Holdings Corp.*, 503 F.3d 1295, 1304, 1305 (Fed. Cir. 2007) (relying on dictionaries to construe terms), *citing Phillips v. AWH Corp.*, 415 F.3d 1303, 1314, 1318 (Fed. Cir. 2005); *L.B. Plastics, Inc. v. Amerimax Home Prods., Inc.*, 499 F.3d 1303, 1308 (Fed. Cir. 2007) ("general and technical dictionaries clearly confirm the district court's construction"); *PODS, Inc. v. Porta Stor,*

Inc., 484 F.3d 1359, 1367 (Fed. Cir. 2007) (construing term by using the dictionary). And while Teva appears to reject dictionaries, it offers a dictionary definition of "homogenous mixture," Teva's Opp. Br. at 15—"a combination … that has uniform composition and properties"—that is consistent with Dr. Byrn's "uniform basic environment," since basicity is the key property described in claim 2 ("basic inorganic salt").

Teva also dismisses Dr. Byrn's explanation of how skilled persons would understand "contact … evenly," on the grounds that Dr. Byrn is too skilled, and thus apparently, too smart to grasp the proper meaning of this term. But Dr. Byrn explained how those terms would be understood by one of ordinary skill, not how he personally understood them. *See, e.g.*, Tr. 102:22-103:22, 105:9-18, 108:3-15, 109:19-110:5 (Byrn). And while complaining about Plaintiffs' extensive and consistent evidence provided by Dr. Byrn, dictionaries and common sense, Teva simultaneously relies heavily on its expert's interpretation and dictionary definitions to construe the disputed claim terms. Teva's Opp. Br. at 15.

Dr. Chambliss's interpretation of "in contact …" is exceedingly narrow. He believes that the pepper coating a steak *au poivre* would not be in "contact … evenly" with the steak until the steak is put in a blender. Tr. 526:25-527:3 (Chambliss Cross). While Teva disapproves of analogies, the Federal Circuit does not, and it recently relied on an analogy to interpret the claim language "intimate contact": "Under the terms of this description, the plastic sleeve could be in intimate contact with multiple fabric rolls, like the plastic wrapping on a package of several hot dogs is in intimate contact with each of the hot dogs, despite the fact that the hot dogs themselves contact each other as well as the packaging." *Baldwin*, 2008 WL 124149, at *5. Under Dr. Chambliss' interpretation, the plastic wrap would not be in intimate contact with the hot dogs until Dr. Chambliss put them in the blender.

Teva's reliance on Dr. Bugay's unfamiliarity with Dr. Byrn's explanation of how proton-transfer works is also misguided. Dr. Bugay, while an expert in analytical chemistry, and in applying analytical chemistry to pharmaceuticals, is not an expert in pharmaceutical formulations—the relevant field here. He was not retained to provide any opinions on this topic, and it would be manifestly unfair to draw any conclusion based on his failure to consider a subject he was not retained to consider.

Teva also challenges the proton-transfer theory on the grounds that its expert, Dr. Meyer, disagrees with it. Dr. Meyer is an expert on solar cells. Tr. 433:11-17 (Meyer Cross). He has no expertise at all in pharmaceutical formulations. Tr. 441:12-442:6 (Meyer Cross).[5] Indeed, many of Dr. Meyer's opinions on issues in the case are outside of his expertise. For example, he opined that magnesium carbonate is soluble, Tr. 419:21-24 (Meyer)—a statement later shown to be incorrect. Tr. 440:20-25 (Meyer Cross); Tr. 1406:16-1407:10, 1407:20-1408:8 (Bugay).

Sources that the Federal Circuit typically relies on for claim construction support Plaintiffs' construction. Only Dr. Chambliss supports Teva's construction.

IV. TEVA'S FLIP-FLOPPING ON ITS NONINFRINGEMENT THEORY SHOWS THIS THEORY IS NOT CREDIBLE

In its Opposition Brief, Teva asserts that it has never taken the position that an impermeable talc layer separates the lansoprazole and magnesium in its products. Teva's Opp. Br. at 25-26. This is simply not true. In its claim construction brief, Teva asserted that "in Teva's product, the benzimidazole compound and the basic organic salt are not in contact at all." D.I. 131, at 2, 4. And at trial, Teva's expert testified that the talc layer functioned like "Saran

[5] He has never published a research paper or taught a course whose primary focus was on pharmaceuticals. He is not a member of any society or organization whose primary focus is directed to pharmaceuticals or pharmaceutical sciences. Tr. 441:9-22 (Meyer Cross). And although Teva put the existence and properties of pharmaceutical coatings at the center of its defense, Dr. Meyer is not an expert on pharmaceutical coatings. Tr. 441:23-442:6 (Meyer Cross); Teva Opp. Br at 51 n.22.

Wrap" in its products, walling off the lansoprazole from the magnesium carbonate. Tr. 466:2-9 (Chambliss). Even at page 22 of its Opposition Brief, Teva reiterates that its layers act like Saran Wrap, and at page 23, shows a cartoon of its granule, in which the lansoprazole and magnesium carbonate are completely separate. Teva's Opp. Br. at 22-23. In identifying its layers as Saran Wrap, Teva has represented that its layers are impermeable, and it cannot suggest otherwise.

Teva's impermeable-layer position clashes with the experimental results and the testimony of Teva's own experts. While Teva's brief shows a perfectly-layered granule cartoon, Teva's Opp. Br. at 23, no parties' experts' experimental results portrayed a granule that looked like this cartoon. Teva's expert Dr. Chambliss conceded that there may be some contact between lansoprazole and magnesium carbonate in Teva's products. Tr. 533:9-21 (Chambliss Cross). And Teva's expert Dr. Meyer admitted that even in the ToF-SIMS data, there were regions where lansoprazole and magnesium carbonate overlapped in the same spectrum. Tr. 433:21-434:11 (Meyer Cross). Since Teva contends that ToF-SIMS is appropriate, Dr. Meyer's admission demonstrates that the talc layer cannot be an impermeable barrier. The record evidence demonstrates that magnesium carbonate stabilizes the lansoprazole in Teva's product by providing a uniform basic environment, due to the contact between the magnesium carbonate and the lansoprazole. Tr. 116:25-118:7, 126:23-127:22 (Byrn); PTX 446A; Tr. 217:6-218:8, 229:10-19 (Bugay); PTX 408; PTX 413-414; PTX 433; PTX 926-927. Teva's own documents show that merely separating lansoprazole from the enteric coating does not stabilize lansoprazole, and the Raman and EDX experiments show that in Teva's products, there is effectively no separation between lansoprazole and magnesium carbonate.

Teva now changes position and contends that its talc barrier need only be an "effective separating barrier." But both Parties' test show that it is not. Both Parties' tests showed that the so-called talc layer is not impermeable and is not an "effective separating barrier." In the case of Raman, the Parties tested 11 different granules and analyzed over 800 spectra. Tr. 229:10-19 (Bugay) What they observed was even contact—both physical touching and close proximity—between lansoprazole and magnesium carbonate in substantially all of the areas that were tested. *Id.* In the case of EDX, the Parties' two expert labs analyzed 14 different granules using EDX, and found contact—both actual physical touching and close proximity—of magnesium carbonate and lansoprazole in all of those EDX maps. Tr. 233:10-20 (Bugay). The testing of both parties establishes that the layers are neither impermeable nor effective separating barriers as Teva argues.

Teva asserts in its brief that the lansoprazole in its products is separated from magnesium carbonate by a talc "layer." Teva's position is refuted by Teva's own development documents, which establish that talc "layers" manufactured by Teva never functioned as an effective separating barrier.[6] Teva's witness Dr. DiCapua testified about reports of substances penetrating between "layers," before Teva stopped testing altogether.[7] Tr. 1661:1-12 (DiCapua). Teva's scientists found that "[t]here is no clear separation between the drug layer and the subcoat," and

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[6] Teva's development documents, which prove that it could not make effective subcoats, are directly relevant to Teva's main contention—its products have layers with separate lansoprazole and magnesium carbonate. And Teva's suggestion that the formulations were not similar to its products is equally without merit. Teva's development formulation included a sugar core with drug coating dispersions *See* PTX 446D, column labeled "Drug Layer" (HPMC is hypromellose) and subcoats just like its ANDA products. PTX 45, Byrn 0036, TVL 6617. There is no basis for Teva's attempt to "discard" this evidence.

[7] Dr. DiCapua, who developed the Teva lansoprazole formulation, admitted that Teva stopped doing any testing, and does not know whether a talc layer truly separates the lansoprazole from the magnesium carbonate. Tr. 1662:21-1663:11 (DiCapua).

the "drug layer and the subcoat are porous. The enteric layer is denser and has layer like morphology." PTX 446B, Byrn 0200, TVL 52765 (emphasis added). Teva simply had no basis—either then or now—for concluding its "layers" effectively separate lansoprazole and magnesium carbonate in its products.

The development documents also establish that lansoprazole in contact with just a talc layer is not stable. Tr. 139:13-141:2, *citing* PTX 446A at Byrn 242; PTX 446D. Teva concedes that talc does not function as a stabilizer, and results in "very bad stability results" in lansoprazole formulations without magnesium carbonate. Tr. 1659:6-18 (DiCapua). And if stabilizing lansoprazole were as simple as separating the lansoprazole from the enteric coat, Teva would not need magnesium carbonate and would avoid infringement of the '321 Patent. But as its own testing observed, Teva needs magnesium carbonate to have a stable product. And Teva's ANDA describes magnesium carbonate as a stabilizer. Tr. 536:7-13 (Chambliss Cross), *citing* PTX 445A at Byrn 34. The only explanation for the stability of Teva's products is contact between the lansoprazole and magnesium carbonate as described and claimed in the '321 Patent.

V. TEVA'S PRODUCT CONTAINS THE REQUIRED UNIFORMLY BASIC ENVIRONMENT

Plaintiffs and their experts have shown that magnesium carbonate creates a uniformly basic environment surrounding the lansoprazole. Tr. 122:4-124:3, 125:16-127:9 (Byrn). The pH of the magnesium carbonate environment is 9.1, which is a basic pH. Tr. 97:3-9 (Byrn).

Teva cites to no evidence suggesting that the pH of the environment surrounding the lansoprazole in its products is not basic. Teva now argues that perhaps other components of Teva's formulation affect the pH of magnesium carbonate, Teva's Opp. Br. at 46, but they cite no expert testimony or other evidence to support this position, or to establish that these other components change the basic nature of the pH surrounding the lansoprazole. Citing Plaintiffs'

expert Dr. Amidon, Teva asserts that the concept of pH is inapplicable in the solid state. Teva's Opp. Br. at 46. However, as Dr. Amidon noted, the concept of pH is applicable to the water layer surrounding the solids in solid formulations. Tr. 1097:7-15 (Amidon). And Teva's expert Dr. Chambliss acknowledged that the concept of pH is applicable in Teva's granule—he admitted that raising the pH and creating an alkaline environment in a solid formulation by adding a basic inorganic salt was "a simple phenomenon." Tr. 508:18-25 (Chambliss). He further testified that "It's not some strange phenomenon that's going on. You just raise the pH." *Id.* 508:25-509:1. Similarly, Dr. Byrn testified:

> a person skilled in the art would know that a slurry of magnesium carbonate in water would be pH 9.1, and there would be essentially no way to change that. **No matter where you had magnesium carbonate and water, you would also have a pH of 9.1**

Tr. 97:4-9 (Byrn, emphasis added). Absent a uniformly basic environment created by the mixture of lansoprazole and magnesium carbonate, there is no other explanation how the magnesium carbonate in Teva's products functions as a stabilizer. Tr. 116:25-117:12, 132:25-133:11 (Byrn).

There is no dispute that Teva's products contain moisture and residual water—indeed, one measurement Teva performed found 1.1% water. Tr. 465:8-11 (Chambliss); Tr. 132:4-14, 161:3-8 (Byrn); 190:14-191:3 (Bugay); PTX 445A at Byrn 184. Moreover, the ANDA specifies that Teva's products may contain up to 5% water. PTX 445A at Byrn 184. Drying cannot eradicate this water, because the enteric coat (like Saran Wrap) physically holds water in the granule. Tr. 132:1-24 (Byrn), Tr. 466:2-9 (Chambliss). One to five percent water is a significant amount. Five percent water is greater than the amount of magnesium carbonate (3.75%), titanium dioxide (0.469%) and triethyl citrate (0.938%) in the formulation. PTX 445A at Byrn 38.

Teva also complains that Plaintiffs' experts did not perform a direct pH measurement on Teva's products. But "there is no requirement for an expert to perform or rely on testing of an accused product in order to establish infringement." *Boston Scientific Scimed, Inc. v. Cordis Corp.*, 392 F. Supp. 2d 676, 685 (D. Del. 2005). The evidence identified by Plaintiffs in their opening brief, including materials from Teva's own ANDA establishing the magnesium carbonate creates an alkaline (*i.e.* basic) environment, establishes the existence of the uniformly basic environment. Plaintiffs' unrefuted evidence that the pH is 9.1 more than satisfies Plaintiffs' burden of proof.

Teva now concedes that even under its definition of "homogenous mixture," it is not necessary that "all of the lansoprazole must be touching all of the magnesium carbonate for there to be a homogenous mixture." Teva's Opp. Br. at 15. Teva never clearly states how much "touching" it believes is required for infringement. By contrast, Plaintiffs require sufficient touching to create a uniform basic environment. With this concession, Teva may have rendered moot the parties' claim construction dispute. Plaintiffs have shown significant touching between lansoprazole and magnesium carbonate. If this significant touching is all Teva requires for infringement, then Plaintiffs have shown infringement under Teva's proposed claim construction.

VI. ToF-SIMS IS NOT AN APPROPRIATE ANALYTICAL TECHNIQUE TO DETERMINE "CONTACT … EVENLY"

ToF-SIMS cannot adequately probe whether there is contact between lansoprazole and magnesium carbonate in Teva's products. ToF-SIMS is a *surface* technique. It only penetrates .001 microns below the uppermost molecular level of the surface being studied. Tr. 134:13-15 (Byrn). That is a significant limitation. The lansoprazole and magnesium carbonate particles in Teva's products are larger than 10 microns. Tr. 216:5-14 (Bugay). Thus, if two such particles are in contact because they are stacked on top of each other, ToF-SIMS would not "see"

this contact. Tr. 238:12-239:9 (Bugay). In essence, Teva would have this Court rely on the analytical test least capable of probing the contact between lansoprazole and magnesium carbonate. ToF-SIMS is unreliable because it cannot detect all such contact.

Nor can ToF-SIMS distinguish magnesium carbonate from talc, and talc is present everywhere in Teva's formulation. Tr. 136:19-23 (Byrn); Tr. 285:1-6, 298:7-24 (Hirt). Teva's brief admits that "[h]ere, the only molecular fragment available to identify magnesium carbonate was magnesium, which is present in both talc and magnesium carbonate." Teva's Opp. Br. at 31; *see also* Tr. 298:7-24 (Hirt). In fact, Teva admits that Raman—not ToF-SIMS—was required to determine whether a signal was talc or magnesium carbonate. Teva's Opp. Br. at 31, lines 2-5.

Teva then contends that it did not manipulate its ToF-SIMS data, but that Plaintiffs insist that it should have. Not true. Instead of fairly presenting its data to show that it could not distinguish between talc and magnesium carbonate, Teva identifies any region containing both talc and magnesium carbonate as a talc region. Tr. 322:4-12, 322:18-24 (Hirt), Tr. 434:12-16, 435:10-25 (Meyer Cross). This "talc" bias underestimates the amount of contact between magnesium carbonate and lansoprazole in Teva's products. Tr. 433:21-434:11, 434:17, 435:18-25 (Meyer Cross). Without this manipulation, Teva's ToF-SIMS would likely confirm what both parties' Raman and EDX data proved: that magnesium carbonate and lansoprazole are in even contact in Teva's products.

Not surprisingly, ToF-SIMS is not widely used in pharmaceutical research. Plaintiffs' expert, Dr. Byrn, who is the head of the Industrial Pharmacy Department at Purdue University, does not know of a single industrial pharmacy or a pharmaceutical department that has a ToF-SIMS unit. Tr. 135:6-14 (Byrn). And Dr. Byrn's recent search of the two top pharmaceutical

research journals showed only three citations to ToF-SIMS in contrast to 1605 citations for Raman. Tr. 135:15-136:4 (Byrn).

Teva's own expert, Dr. Meyer, admitted that "ToF-SIMS is a technique that I haven't had a lot of personal experience with." Tr. 377:3-4 (Meyer). He has never made measurements using ToF-SIMS, and he has never published any articles about it. Tr. 436:21-23, 438:20-23 (Meyer Cross). The Department of Chemistry at Johns Hopkins at which he teaches does not even have a ToF-SIMS instrument. Tr. 437:15-23 (Meyer Cross). Dr. Meyer admits that he made no independent assessment of the ToF-SIMS techniques except "what I know about from my prior knowledge." Tr. 430:13-19 (Meyer Cross). He further admitted that he was not an expert in ToF-SIMS. Tr. 438:24-439:1 (Meyer Cross).

In attempting to establish the acceptance of ToF-SIMS, Teva relies heavily on an article discussing ToF-SIMS authored by Dr. Bugay. DTX 901, Tr. 174:14-175:4 (Byrn). Far from being a whole-hearted endorsement of ToF-SIMS, the article noted that every analytical technique has its limitations, and those limitations should be recognized and understood to determine whether a technique is appropriate for a particular investigation. DTX 901, Tr. 236:4-5, 236:11-237:8 (Byrn).

Teva's position appears to be that if the ToF-SIMS test results do not show "contact … evenly," but Raman and EDX do, then ToF-SIMS must be the better test. But it does not work that way—Teva cannot justify ToF-SIMS merely because it is the only test that Teva can interpret (wrongly) in its favor.[8] Both Drs. Byrn and Bugay, the true experts in this area,

[8] Even Teva's expert Hirt admits he misinterpreted the ToF-SIMS data, erroneously identifying a talc layer. Tr. 345:3-20 (Hirt Cross). He wrongly identified an "an extra talc layer in the outside region, just based on the cluster of the talc, but it turns out that to be more of a marbled structure." Tr. 345:14-17 (Hirt Cross).

testified that ToF-SIMS is not appropriate in this case because as a true surface technique, "it's just scratching the surface." Tr. 134:11-135:4 (Byrn).

VII. BOTH SIDES' NEARLY-IDENTICAL RAMAN AND EDX RESULTS PROVE INFRINGEMENT

A. The Agreement of The Parties' Raman and EDX Data Shows Teva's Claims of Sample Preparation Errors Are Without Merit, and that the Raman and EDX Data are Reliable

The consensus of all the experts in this case is that the results of both parties' Raman and EDX experiments produced similar spectra. Tr. 221:9-223:14 (Bugay), Tr. 430:6-9 (Meyer Cross). Teva's expert Mr. Hirt admitted that the Raman spectra taken at numerous spatial positions along the line maps shows the presence of both lansoprazole and magnesium carbonate in Teva's products. Tr. 348:22-356:5 (Hirt Cross). Dr. Bugay demonstrated the one-to-one correspondence between Plaintiffs' results and Teva's Raman results. Tr. 222:11-223:14 (Bugay). And Dr. Meyer confirmed that both Mr. Hirt's and Dr. Bugay's experiments agreed:

> Q. Am I correct, I think you said this in your testimony, that in your view, Mr. Hirt's and Dr. Bugay's Raman spectroscopy results were largely in agreement?
>
> A. That's correct.

Tr. 430:6-9 (Meyer Cross); see also PTX 378; Tr. 221:9-223:14 (Bugay).

Dr. Meyer also testified:

> Q.….You could read Mr. Hirt's data and Dr. Bugay's data to be consistent; is that right?
>
> A. That's right. Actually, I was somewhat surprised. When I got Mr. Hirt's report and I actually compared the data, qualitatively, they were quite similar in the Raman and the EDX.

Tr. 411:23-412:3 (Meyer Cross).

Thus, Teva's attacks on Plaintiffs sample preparation are both irrelevant and lacking in credibility. Both sides' experts, using two different Raman instruments and EDX instruments at

two different laboratories, obtained the same results. This sameness demonstrates that Plaintiffs' Raman and EDX data can be relied upon with a high degree of confidence.

Nor are Teva's criticisms valid. Plaintiffs' experts properly prepared their samples for study. No one disputes that Dr. Bugay is an expert on Raman, EDX and sample preparation, and Dr. Bugay has literally performed thousands of these experiments. Tr. 202:20-22 (Bugay). Dr. Bugay studied the samples by optical magnification (40x), Tr. 206:15-23 (Bugay), and found no evidence of smearing. Tr. 207:3-22 (Bugay). Likewise, there was no evidence of contamination or degradation, as measured by the goodness of fit data, that may have otherwise skewed the results. Tr. 218:10-219:18 (Bugay).

Teva's assertion of sample preparation problems is rank speculation, particularly given the identity of results among all experts. For instance, Dr. Meyer testified that "it would be my guess" some lansoprazole was dragged off the granule onto the surface below in Dr. Bugay's testing. Tr. 407:10-17 (Meyer). But SEM/EDX experiments are performed in an ultra-high vacuum, and when samples are placed in the vacuum, any loose powder is "sucked away" by the vacuum. Tr. 1418:12-1419:4 (Bugay). As Dr. Bugay explained, what Dr. Meyer identified is an inherent part of an EDX spectrum, and is found both in Dr. Bugay and Mr. Hirt's EDX data. Tr. 1417:19-1419:4 (Bugay). This background scattering, called "Bremsstrahlung," is appropriately ignored by skilled practitioners in the field. Tr. 273:10-21 (Bugay Cross).

B. Teva's Attack on the Sufficiency of Both Parties' Tests Is Baseless

Unable to meaningfully distinguish the parties' data, Teva contends that all of the Raman and EDX results are inherently flawed because they lack the necessary "spatial resolution" to show contact between lansoprazole and magnesium carbonate. Teva's theory is mostly based on the testimony of Dr. Meyer. But Dr. Meyer admits that he made no independent assessment of the Raman experiments in this case other than "what I know from my prior knowledge."

Tr. 430:13-22 (Meyer Cross). He also admits that he is not an expert in Raman spectroscopy. Tr. 427:10-14 (Meyer Cross). Given these two admissions, it is not surprising that his testimony contained numerous factual errors.

For instance, Dr. Meyer testified that the Raman experiments were not reliable, because "I would guess, I don't know for sure, that in the experiments that were done, some of the excitation light passes through the entire sample." Tr. 397:13-16 (Meyer). When pressed on cross, Meyer admitted that his testimony was just speculation and that he did not know how deep the Raman beam penetrates. Tr. 432:9-18 (Meyer Cross). Dr. Meyer also criticized Dr. Bugay's spatial resolution analysis as "horribly naive," based on Dr. Meyer's assumption that magnesium carbonate was highly soluble in water. Tr. 414:1-22 (Meyer). Dr. Meyer was just plain wrong. As the learned treatise introduced by Plaintiffs proves, magnesium carbonate is practically **insoluble** in water, Tr. 1406:16-1408:8 (Bugay), *citing* PTX 954, and even Dr. Meyer conceded this fact during cross-examination, Tr. 440:20-441:8 (Meyer Cross).

In contrast, Dr. Bugay proved that Raman laser beam penetrates only 5.6 microns—completely insufficient to extend through multiple layers of Teva granules. Tr. 1409:1-1410:15 (Bugay). This means that the beam penetrates only one layer deep. Teva's expert Mr. Hirt correctly identified the depth of penetration of EDX as being "from half a micron to about five microns," consistent with Dr. Bugay's testimony and the scientific literature. Tr. 300:18-301:4 (Hirt); Tr. 1416:3-1417:5 (Bugay). These Raman and EDX spatial resolutions are sufficient to show contact between particles lansoprazole and magnesium carbonate where these particles are larger than 10 microns. Tr. 216:5-217:5 (Bugay). Teva does not dispute Dr. Bugay's testimony in its brief.

Teva and its expert Dr. Meyer also rely on a marketing brochure describing a technique called confocal Raman microscopy. Tr. 399:24-400:20 (Meyer). Dr. Bugay, who is an expert on Raman microscopy (unlike Dr. Meyer), testified that confocal microscopy is a different technique not used by any expert in this litigation or party, and which is not at issue in this litigation. Tr. 1415:2-22 (Bugay).

VIII. PLAINTIFFS PROVED SUFFICIENT CONTACT THAT IS "CONTACT … EVENLY"

Teva now contends that Plaintiffs did not prove infringement, allegedly because Plaintiffs "could not tell the Court how much lansoprazole and how much magnesium carbonate were present in any given formulation in any given area of Teva's ANDA product." Teva's Opp. Br. at 3. This is a straw man. The '321 Patent does not require any such showing. There are no examples in the patent that show how much lansoprazole and magnesium carbonate are present in a given part of the claimed composition. There are no descriptions of acceptable limits, and there is no description of the tests one would use measure it. Even Teva admits that "not all of the lansoprazole must be touching all of the magnesium carbonate…." Teva's Opp. Br. at 15. "Contact … evenly" is a qualitative phrase, not a quantitative one. And none of Teva's experts propose a quantitative limit to "contact … evenly," nor does Teva explain what quantity of "contact" would satisfy its new interpretation of what claim 2 requires.

Teva's products meet the "in contact … evenly" requirement because they have a mixture of magnesium carbonate and lansoprazole in a uniform basic environment. The Raman and EDX results show contact between lansoprazole and magnesium carbonate through large regions of Teva's products. Dr. Byrn testified that throughout the lansoprazole and magnesium-carbonate regions, the granules' pH would be 9.1, thus establishing a uniform alkaline environment. For that reason, Teva's products infringe claim 2.

IX. TEVA'S PRODUCT INFRINGES EVEN IF THE COURT ADOPTS TEVA'S CONSTRUCTIONS

Even if "contact … evenly" meant that lansoprazole and magnesium carbonate must be homogenously mixed, Teva and its experts concede that the prosecution history provides that a "homogenous mixture is defined when each individual unit is within 6 percent of the relative standard deviation," as determined by the Content Uniformity Standard of the United States Pharmacopeia ("USP"). Tr. 520:22-521:16 (Chambliss Cross); *see also* Tr. 488:22-25 (Chambliss) ("Well, during the prosecution of the '321 by this declaration and the amendment that we just reviewed, they're telling the examiner that in contact evenly means a homogenous mixture using the USP criteria.").

It is undisputed that Teva's products satisfy the requirements for Content Uniformity under the USP criteria. Teva measured a relative standard deviation (RSD) by the Content Uniformity test of 1.7% or less, Tr. 145:18-146:1 (Byrn), far less than the 6% limit established in the patent prosecution history and required by the USP test, Tr. 146:2-7 (Byrn), Tr. 488:7-8 (Chambliss), Tr. 520:22-521:16 (Chambliss Cross). For these reasons, Teva's products comprise a homogeneous admixture as that term is explicitly defined in the '321 Patent and prosecution history, and Teva's products infringe even under Teva's construction.

Teva's contentions under its tortured claim constructions for "pharmaceutical composition" and "wherein the composition is made up into … granules and then coated by a coating agent" depend on its incorrect factual assertion that lansoprazole and magnesium carbonate are not in contact. Since these components are in contact, Teva's noninfringement theories fail.[9]

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[9] Plaintiffs have fully addressed the remaining term, "the weight of the inorganic salt that is in even contact with the benzimidazole," in its Opening Brief. Pls.' Opening Br. (D.I. 163) at 20-21.

X. DR. BYRN DISCLOSED HIS PROTON-TRANSFER THEORY IN HIS RULE 26 DISCLOSURES, UNLIKE TEVA'S DR. MEYER WHOSE TESTIMONY SHOULD BE EXCLUDED

In his opening expert report of June 22, 2007, Dr. Byrn disclosed his opinion that "in contact … evenly" would be understood by a person of ordinary skill in the art to mean a mixture of the benzimidazole compound in contact with the basic (*i.e.* alkaline) inorganic salt in a *uniformly basic environment*." Byrn Expert Report at 22, ¶ 71 (emphasis added).[10] In that same report, he explained that one of ordinary skill in the art would understand that there is water present in the claimed composition, and that "*water can facilitate or mediate 'contact … evenly' between lansoprazole and the magnesium carbonate*." *Id.* at 23, ¶ 72E-F (emphasis added). And in a declaration submitted in support of Plaintiffs' claim construction brief, Dr. Byrn again addressed the concept of a "uniformly basic environment," and explained that proton transfer mediates the contact between lansoprazole and magnesium carbonate in a solid-state drug formulation in the presence of moisture and results in an alkaline environment. Byrn Decl. ¶ 48, D.I. 134. These disclosures meet all the requirements of Rule 26, and provided Teva with a full disclosure of Dr. Byrn's opinions.

Teva's counsel cross-examined Dr. Byrn at length about the proton-transfer theory at his deposition on September 14, 2007. Byrn Dep. 150:7-17, 154:13-155:15, 156:1-157:8, 157:11-14, 157:16-158:5 (attached hereto as Exhibit 1). Teva's counsel also cross-examined Dr. Byrn concerning his opinion that the pH of Teva's granules was 9.1. *Id.* 150:7-153:7. Having had ample opportunity to question Byrn about this theory and his opinions concerning pH, Teva cannot legitimately claim it was surprised and prejudiced at trial. Dr. Byrn's trial testimony should not be excluded.

[10] An excerpt of Byrn's Expert Report is attached as Exhibit 2.

On the other hand, although asked at his deposition, Dr. Meyer never told Plaintiffs' counsel that he intended to testify on proton transfer, uniform basic environment, or pH—topics that were also not in Dr. Meyer's expert report. Meyer Dep. 124:19-25.[11] Yet he was deposed nearly a week after Dr. Byrn, and more than a week after Dr. Byrn provided his Rule 26 declaration to this Court and Teva's counsel. Thus, Dr. Meyer's testimony on these topics should be stricken, while Dr. Byrn's testimony should not be.

XI. 35 U.S.C. § 271(e)(4)(A) PREVENTS TEVA'S ANDA'S APPROVAL, AND THE COURT SHOULD EXERCISE ITS DISCRETION TO BROADEN THE INJUNCTION

If this Court rules in Plaintiffs' favor, 35 U.S.C. § 271(e)(4)(A) provides that the Court shall issue an injunction ordering that the effective date of approval of Teva's ANDA No. 77-255 cannot be earlier than the expiration date of the infringed patents (including any extensions for pediatric exclusivity). This relief is statutorily mandated, irrespective of any equities that Teva claims to exist.

In addition to this required injunctive relief, this Court has discretion under § 271(e)(4)(B) to broaden the scope of the injunction to enjoin Teva from filing or continuing to pursue ANDAs on other products that are not colorably different from the products described in ANDA No. 77-255. Plaintiffs believe that the issue of additional relief should be addressed after the Court issues a decision on infringement, and Plaintiffs will propose a briefing schedule at that time should Plaintiffs prevail. However, because Teva has already stated its opposition to an injunction that goes beyond ANDA No. 77-255, Plaintiffs respond briefly now to Teva's assertions.

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[11] A copy of the cited portion of Meyer's deposition testimony is attached as Exhibit 2 to Plaintiffs' Opening Post-Trial Brief, D.I. 164.

In *Abbott Labs. v. Torpharm, Inc.*, 503 F.3d 1372 (Fed. Cir. 2007), the Federal Circuit held that it is "entirely within [a district court's] discretionary authority to issue an order expanding the original injunction" relating to an ANDA at issue in a first litigation to include other ANDAs and potential future products with "no more than a colorable difference from the first." *Id*. at 1381.

Here, the requested relief would cover Teva's ANDA 78-730 for a generic version of Plaintiffs' orally disintegrating tablet version of Prevacid® ("ODT ANDA").[12] Teva's ODT ANDA is not colorably different than the ANDA in this case (No. 77-255) with respect to the '098 and '321 patents. The ANDA also describes a product with lansoprazole as its active ingredient (thus infringing the '098 patent) and uses the same process to manufacture granules used in the product (thus infringing the '321 patent). Teva even agreed on the record at the recent discovery conference in the Prevacid ODT litigation that "infringement or noninfringement and invalidity as it relates to the lansoprazole active ingredient aspects will be determined by the result of the previous case," *i.e.*, this one. (C.A. No. 07-33-SLR, D.I. 41, Tr. 7:3-6).

Moreover, Teva is wrong on the equities. Section 271(e)(4)(A) provides that "the court *shall* order the effective date of any approval of the drug … involved in the infringement to be a date which is not earlier than the date of the expiration of the patent which has been infringed." 35 U.S.C. § 271(e)(4)(A) (emphasis added). Only under § 271(e)(4)(B), which provides that "injunctive relief *may* be granted against an infringer to prevent the manufacture, use, offer to

[12] A patent infringement suit involving the ODT ANDA and the '098, '321, and additional patents is presently before the Court, C.A. No. 07-33-SLR. The issues concerning the '098 and '321 patents in the ODT ANDA case are exactly the same as the issues considered by this Court in connection with ANDA 77-255.

sell, or sale … or importation," would this Court consider the four factors required by *eBay*. 35 U.S.C. § 271(e)(4)(B) (emphasis added).

Because Teva cannot obtain market approval of the ANDA involved in this case prior to the expiration of the patents in suit, it will not be harmed by an injunction forbidding it from engaging in other infringing activities. Thus, the balance of hardships favors Plaintiffs. And the public interest strongly favors Plaintiffs, because if the system does not permit Plaintiffs to enforce their patents, Plaintiffs would never have made the research and development investment that led to lansoprazole, and to formulations that stabilize lansoprazole, and Teva would not have a product to copy. *Sanofi-Synthelabo v. Apotex, Inc.*, 470 F.3d 1368, 1383 (Fed. Cir. 2006) ("[T]he encouragement of investment-based risk is the fundamental purpose of the patent grant, and is based directly on the right to exclude.").

In regard to irreparable injury, TAP's Vice-President of Sales, Doug Cole, provided the only record evidence. He testified that if Teva were permitted to sell a generic lansoprazole product, TAP's Prevacid would irreversibly lose its entire market within six months. Tr. 1061:7-12 (Cole).[13] The Federal Circuit has recognized that in cases involving generic drug products, the introduction of an infringing generic product will cause irreversible market share and price erosion. *Sanofi*, 470 F.3d at 1382 ("it is nearly impossible to restore [the brand-name product] to its pre-launch price since the generic entered the market"). Teva does not rebut Mr. Cole's testimony, nor does it explain how TAP's likely loss of its entire Prevacid market will be compensated.

Mr. Cole also testified that if Teva started selling a generic lansoprazole product, TAP would be devastated, because TAP depends on only two products, one of which is Prevacid, and

[13] As mentioned above, Plaintiffs reserve the right to present additional information on this issue, if necessary, when the issue of injunctive relief is appropriately before the Court.

because Prevacid is by far the largest part of TAP's business. Tr. 1061:13-18 (Cole). Not only does Teva fail to rebut this evidence, but it provides no explanation of how TAP would be restored as a company if it is forced to lay off numerous workers and contracts in response to Teva's sales.

Teva further contends that generic omeprazole and pantoprazole have already created a generic market. If that were so, Teva would have little incentive to make generic lansoprazole, because this product would compete with cheaper products that would make Teva's investment worthless. But Teva continues to recognize Prevacid's commercial value: "[Prevacid] had annual sales of approximately $3.4 billion in the United States for the twelve months ended September 30, 2007, based on IMS sales data." Teva Press Release, January 23, 2008, *available at* http://www.tevapharm.com/pr/2008/pr_722.asp. Thus, Teva still perceives generic lansoprazole as a significant commercial opportunity. Teva's contentions that TAP sells products abroad is untrue—TAP sells only in the United States. And while TAP is preparing for the eventual expiration of its patents in 2009, that does not mean that TAP will not be irreparably harmed by Teva's generic products if they enter the market in 2007.

Teva also speculates, inaccurately, that Novartis might launch a Prevacid OTC product before the patents-in-suit expire in 2009. No record evidence supports this speculation.

Finally, Teva contends that TAP's harm could be estimated in money damages, and thus, that an injunction is not appropriate. If that were the rule, an injunction would not issue in any patent case, because a patentee's damages can always be calculated to some extent. "[M]erely because a patentee is able to identify a monetary amount that it deems sufficient … does not necessarily mean that it automatically foregoes its right to seek a[n] … injunction …." *Sanofi*, 470 F.3d at 1382.

This Court should exercise its discretionary authority and enjoin Teva's ODT ANDA and any other ANDA describing products that are not colorably different from those described in ANDA No. 77-255 until the '098 and '321 patents expire (including any pediatric exclusivity extension).

XII. CONCLUSION

For the reasons set forth above, Plaintiffs respectfully request that this Court find that Teva's products, if made, used or sold, would infringe claim 2 of the '321 Patent. Further, in light of Teva's admission that its products would, if made, used or sold, infringe claim 10 of the '098 Patent, Plaintiffs respectfully request that the Court enter a judgment that approval of Teva's ANDA No. 77-255 should not be earlier than the expiration of the '098 patent, including any extensions that may apply.

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January 30, 2008
1445081

CERTIFICATE OF SERVICE

I hereby certify that on January 30, 2008, I caused the foregoing to be electronically filed with the Clerk of the Court using CM/ECF which will send electronic notification of such filing to the following:

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Additionally, I hereby certify that true and correct copies of the foregoing were caused to be served on January 30, 2008 upon the following individuals in the manner indicated:

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