IN THE COURT OF CHANCERY OF THE STATE OF DELAWARE

PHARMATHENE, INC., a Delaware corporation,	)	
Plaintiff,	)	
v.	)	Civil Action No. 2627-VCP
SIGA TECHNOLOGIES, INC., a Delaware corporation,	)	
Defendant.	)	

MEMORANDUM OPINION

Submitted: January 15, 2014
Decided: August 8, 2014

A. Richard Winchester, Esq., Christopher A. Selzer, Esq., McCARTER & ENGLISH, LLP, Wilmington, Delaware; Roger R. Crane, Esq., K&L GATES LLP, New York, New York; *Attorneys for Plaintiff*.

Stephen P. Lamb, Esq., Meghan M. Dougherty, Justin A. Shuler, Esq., PAUL, WEISS, RIFKIND, WHARTON & GARRISON LLP, Wilmington, Delaware; Walter Rieman, Esq., Jaren Elizabeth Janghorbani, Esq., PAUL, WEISS, RIFKIND, WHARTON & GARRISON LLP, New York, New York; Harold P. Weinberger, Esq., Seth F. Schinfeld, Esq., KRAMER LEVIN NAFTALIS & FRANKEL LLP, New York, New York; *Attorneys for Defendant*.

PARSONS, Vice Chancellor.

On May 24, 2013, the Delaware Supreme Court issued its decision (the "Supreme Court Opinion")[1] in SIGA Technologies, Inc.'s ("SIGA") appeal of this Court's September 22, 2011 post-trial opinion (the "Post-Trial Opinion").[2] In its decision, the Supreme Court upheld my determination that SIGA had breached, in bad faith, its contractual obligation to negotiate a license agreement for the smallpox antiviral ST-246 with PharmAthene, Inc. ("PharmAthene") that would incorporate the details of a license agreement term sheet (the "LATS") to which SIGA and PharmAthene previously had agreed. The Supreme Court reversed my conclusion that SIGA also was liable under the doctrine of promissory estoppel and, in doing so, reversed my damages award to PharmAthene, which took the form of an equitable payment stream, on the basis that it was "unclear to what extent the Vice Chancellor based his damages award upon a promissory estoppel holding rather than upon a contractual theory of liability."[3] The Supreme Court remanded the case for the purpose of enabling this Court to reconsider its damages award in light of the decision on appeal.

On remand, PharmAthene argues that all potential remedies for SIGA's breach, including those I rejected in the Post-Trial Opinion, are "back on the table." SIGA contends that, based on the Supreme Court Opinion, PharmAthene no longer is entitled to

---

1 *SIGA Techs., Inc. v. PharmAthene, Inc.*, 67 A.3d 330 (Del. 2013) (hereinafter *Supreme Court Opinion*).

2 *Pharmathene, Inc. v. Siga Techs., Inc.*, 2011 WL 4390726 (Del. Ch. Sept. 22, 2011) (hereinafter *Post-Trial Opinion*).

3 *Supr. Ct. Op.*, 67 A.3d at 351.

any equitable or non-contractual remedy and that it is not entitled to an award of contractual expectation damages because it failed to prove any such damages with the requisite certainty.

This Memorandum Opinion, which addresses the issues presented on remand, is divided into two sections. In Section I, I provide a brief background of the relevant history of this dispute and describe this Court's understanding of the scope of the Supreme Court's mandate on remand. In Section II, I consider PharmAthene's right to recover contractual damages for SIGA's bad faith conduct.

For the reasons that follow, I conclude that PharmAthene has proven adequately that it is entitled to an award of a lump sum as expectation damages for SIGA's breach of contract. Specifically, I find that PharmAthene has demonstrated that it is entitled to an award of expectation damages in the form of a lump sum for lost profits, which are to be calculated in accordance with the rulings set out in this Memorandum Opinion and the Order being entered concurrently herewith.

I. BACKGROUND

A. The Post-Trial Opinion

In January 2011, the Court presided over an eleven-day trial in this action.[4] After extensive post-trial briefing, counsel presented their final arguments on April 29, 2011. On September 22, 2011, I issued my Post-Trial Opinion in which I found in favor of

---

[4] Trial was held on January 3–7, 10–12, 18–19, and 21, 2011. Unless otherwise noted, the capitalized terms in this Memorandum Opinion are defined as they were in the Post-Trial Opinion.

SIGA on Counts One through Four and Count Seven of the Complaint. Counts One through Four were premised on the notion that there was a binding agreement between the parties that encompassed the terms of the LATS, such that the LATS effectively constituted a license agreement.[5] Based on the evidence presented at trial, I held that the LATS, viewed either as a stand-alone document or as later incorporated, in turn, into the merger term sheet, the Bridge Loan Agreement, and the Merger Agreement, was not a binding license agreement. PharmAthene, therefore, lacked the requisite underlying license agreement to prevail on its first four causes of action. As to Count Seven, PharmAthene's claim for unjust enrichment, I rejected that claim because it was subsumed by both its breach of contract and promissory estoppel claims in Counts Five and Six, respectively, of the Complaint.

In Count Five, PharmAthene argued that SIGA had breached its explicit contractual obligation to negotiate, in good faith, a license agreement with it for ST-246. In the Post-Trial Opinion, I held that SIGA had a contractual duty to negotiate, in good faith, a license agreement with PharmAthene with economic terms substantially similar to those contained in the LATS. I also held that SIGA's proposals to PharmAthene in that regard, namely, the various iterations of the Draft LLC agreement SIGA proposed in November 2006, reflected a "complete disregard for the economic terms of the LATS"

---

[5] The most relevant of these counts was Count One, in which PharmAthene sought specific performance of a license agreement between it and SIGA in conformity with the terms of the LATS.

and were made to PharmAthene in bad faith.[6] Therefore, I determined that SIGA had breached its obligation to negotiate the terms of a license agreement with PharmAthene in good faith.

In Count Six of the Complaint, PharmAthene alleged it was entitled to damages based on promissory estoppel because: (1) SIGA promised PharmAthene that either the parties would merge or it would get a license to ST–246; (2) PharmAthene reasonably relied on that promise and undertook to assist in the development of ST–246; and (3) PharmAthene suffered harm as a result. I found that the evidence supported PharmAthene's arguments in this respect and, accordingly, also held SIGA liable for promissory estoppel.

As a remedy for SIGA's bad faith breach of its obligation to negotiate a license agreement in good faith and for its liability for promissory estoppel, I awarded PharmAthene an "equitable payment stream or equitable lien" based on SIGA's future profits from any successful commercialization of ST-246.[7]

On October 4, 2011, SIGA moved for reargument, which I denied in a December 16, 2011 Memorandum Opinion.[8] The parties then submitted competing forms of order. On May 31, 2012, I entered the Final Order and Judgment in this matter along with a

---

6 *Post-Trial Op.*, 2011 WL 4390726, at *24–26.

7 Some specifics of the payment stream are discussed in greater detail *infra*.

8 *PharmAthene, Inc. v. SIGA Techs., Inc.*, 2011 WL 6392906 (Del. Ch. Dec. 16, 2011).

Letter Opinion explaining my rationale for the manner in which I resolved over thirty discrete points of disagreement reflected in the parties' competing orders.[9] Thereafter, SIGA appealed, among other things, the Post-Trial Opinion and the Final Order and Judgment to the Delaware Supreme Court. PharmAthene promptly cross-appealed.

B. The Supreme Court Decision

On May 24, 2013, the Supreme Court issued its decision. Noting that, among other things, SIGA "began experiencing 'seller's remorse' during the merger negotiations with PharmAthene," the Supreme Court affirmed my conclusion "that SIGA acted in bad faith when negotiating the license agreement in breach of its contractual obligations under both the Merger Agreement and the Bridge Loan Agreement."[10] The Court also upheld my finding that "but for SIGA's bad faith negotiations, [SIGA and PharmAthene] would have consummated a license agreement."[11] Under these circumstances, the

---

9 *PharmAthene, Inc. v. SIGA Techs., Inc.*, 2012 WL 2146000 (Del. Ch. May 31, 2012).

10 *Supr. Ct. Op.*, 67 A.3d 330, 347 (Del. 2013). Regarding what constitutes "bad faith" conduct, the Supreme Court held that "[u]nder Delaware law, 'bad faith is not simply bad judgment or negligence, but rather it implies the conscious doing of a wrong because of dishonest purpose or moral obliquity; it is different from the negative idea of negligence in that it contemplates a state of mind affirmatively operating with furtive design or ill will.'" *Id.* at 346 (quoting *CNL–AB LLC v. E. Prop. Fund I SPE (MS REF) LLC*, 2011 WL 353529, at *9 (Del. Ch. Jan. 28, 2011)).

11 *Id.* at 351.

Supreme Court held that SIGA and PharmAthene had reached a "Type II"[12] preliminary agreement to negotiate in good faith, and that PharmAthene was entitled to recover contract expectation damages for SIGA's bad faith breach of that agreement.[13]

The Supreme Court, however, reversed my holding that SIGA also was liable for promissory estoppel. SIGA's promise to negotiate a license agreement in accordance with the terms of the LATS was included expressly in both the Bridge Loan and Merger Agreements. Consequently, the Supreme Court held that PharmAthene did not have a valid promissory estoppel claim because "fully integrated, enforceable, contract[s] govern[] the promise at issue."[14] Citing the reversal of my holding as to PharmAthene's promissory estoppel claim, the Supreme Court also reversed my damages award because: (1) the Supreme Court had "not previously addressed whether Delaware recognizes Type II preliminary agreements and permits a plaintiff to recover expectation damages"; and (2) it was unclear to what extent my damages award was "based on a promissory estoppel holding rather than upon a contractual theory of liability predicated on a Type II

---

12 *See id.* at 349 ("Parties create a Type II preliminary agreement when they agree on certain major terms, but leave other terms open for further negotiation. [T]he parties can bind themselves to a concededly incomplete agreement in the sense that they accept a mutual commitment to negotiate together in good faith in an effort to reach final agreement within the scope that has been settled in the preliminary agreement. A Type II agreement does not commit the parties to their ultimate contractual objective but rather to the obligation to negotiate the open issues in good faith in an attempt to reach the alternate objective within the agreed framework.") (internal quotation marks and citations omitted).

13 *Id.* at 350–51.

14 *Id.* at 348.

preliminary agreement."[15] The Court, therefore, remanded the case to me for "reconsideration of the damages award" in light of its decision.

C. The Scope of the Remand

Before reconsidering my damages award in light of the Supreme Court's decision, I first must determine what portions of the Post-Trial Opinion are subject to reconsideration and what, if any, relevant portions are not. In addition to SIGA's appeal, PharmAthene cross-appealed certain of my holdings in the Post-Trial Opinion. Regarding PharmAthene's cross-appeals, the Supreme Court held as follows:

> PharmAthene's claims that it is entitled to (1) an alternative payment stream based on the LATS's terms, (2) specific performance granting it a license in accordance with the LATS's terms because the LATS is an enforceable contract, or (3) recover damages under the doctrine of unjust enrichment. All those claims are alternative contentions advanced in the event we do not affirm the Vice Chancellor's judgment. Because we affirm the Vice Chancellor's finding that SIGA is liable for breaching its contractual obligations to negotiate in good faith in accordance with the LATS's terms, we do not reach these arguments. PharmAthene also contends that the Vice Chancellor erroneously failed to award PharmAthene its lump sum expectation damages on the basis that they would be too speculative. We do not reach this claim either, because we reverse the Vice Chancellor's damages award and remand for him to reconsider it in light of this opinion.[16]

Because the Supreme Court did not need to reach the issues PharmAthene raised in its cross-appeal, there are two questions I must address: (1) may I reconsider my

---

[15] *Id.* at 351.

[16] *Id.* at 353.

conclusions in the Post-Trial Opinion on the issues raised in the cross-appeal;[17] and, assuming I can, (2) is there any basis to change my holdings in these respects?

The plain language of the Supreme Court's decision indicates that I may reconsider my prior finding that an award of lump sum expectation damages to PharmAthene would be improper because such a measure of damages is too speculative. In addition to the language quoted above, the Supreme Court held explicitly that I am free to "reevaluate the helpfulness of expert testimony" when determining a new damages award.[18] The Court's guidance in that respect would be rendered largely superfluous if the rest of its decision is read as prohibiting me from reconsidering whether PharmAthene is entitled to lump sum expectation damages for SIGA's bad faith breach. Moreover, SIGA itself recognizes that, based on the Supreme Court Opinion, my holding in the Post-Trial Opinion as to whether lump sum expectation damages are too

---

[17] SIGA argues that, as a matter of law, I may not. In support of its argument, SIGA cites *Focht v. Mut. Ben. Ins. Co.*, 505 A.2d 452, 1986 WL 16313 (Del. 1986) (TABLE), in which the Supreme Court affirmed the decision of the court below and, as such, did not address the issues raised in a cross appeal and found them to be "moot." *Id.* *Focht* is inapposite to the facts of this case. First, *Focht* did not involve a remand because the Supreme Court affirmed the trial court's decision. Second, and of greater significance, the Supreme Court affirmed the decision below in *Focht* in its entirety, which it did not do here. In addition to reversing one of the grounds upon which I held SIGA liable to PharmAthene, the Supreme Court also vacated my damages award and at least implicitly invited me to "reconsider" my decision not to grant PharmAthene an award of lump sum expectation damages, even though it did not reach that issue. Therefore, unlike in *Focht*, the fact that the Supreme Court did not reach a particular element of PharmAthene's cross-appeal does not necessarily make that element the law of the case to which I am bound and from which I cannot deviate on remand.

[18] *Supr. Ct. Op.*, 67 A.3d at 353.

speculative cannot be the "law of the case."[19] Therefore, while I have the authority to reaffirm my previous decision in that regard, I am not required or bound by it to reach the same conclusion I did previously.

Similarly, I consider myself free to determine anew if PharmAthene is entitled to a payment stream from SIGA based on the terms of the LATS, although I could only do so in the context of SIGA's breach of contract. In the Post-Trial Opinion, I awarded PharmAthene a payment stream with terms that were significantly less favorable to it than those set out in the LATS.[20] The Supreme Court's ruling that "SIGA and PharmAthene entered into a Type II preliminary agreement and that *neither party could in good faith propose terms inconsistent with that agreement*,"[21] appears to place greater weight on the terms specified in the LATS than I afforded those terms in determining my prior damages award. At a minimum, therefore, if I again determined that PharmAthene is entitled to a damages award based on a payment stream or otherwise, the Supreme

---

19 Remand Arg. Tr. 68–69. SIGA does argue, however, that regardless of whether that prior holding is "binding," nothing in the record would support my reaching the opposite conclusion in these remand proceedings. I address that argument in Section II.D.1.a, *infra*.

20 The damages award included, for example, a $40 million "upfront" payment from PharmAthene to SIGA, whereas the LATS only required a $16 million payment. In addition, the damages award was based on a 50/50 split between SIGA and PharmAthene of all net profits above $40 million, whereas the LATS had a more nuanced, revenue-based approach that was significantly more favorable to PharmAthene. *Post-Trial Op.*, 2011 WL 4390726, at *40 n.234 & n.235 (Del. Ch. Sept. 22, 2011).

21 *Supr. Ct. Op.*, 67 A.3d 330, 351 (Del. 2013) (emphasis added).

Court Opinion requires that I reexamine the role of the terms of the LATS in crafting any such award.

The effect of the Supreme Court's Opinion on the issue of specific performance is more complicated. Count One of the Complaint sought specific performance of a license agreement between SIGA and PharmAthene based on the terms of the LATS. After trial, I dismissed that claim on the merits, with prejudice. Although the Supreme Court reversed my conclusion as to Count Six (promissory estoppel) and my damages award, it did not comment on or disturb my holding as to Count One.[22] I also consider it significant that the Supreme Court reversed my holdings as to Count Six and the appropriate measure of damages for reasons unrelated to my grounds for finding in SIGA's favor on Count One. Said differently, the Supreme Court did not disturb my holding that PharmAthene was not entitled to a judgment ordering SIGA to specifically perform a license agreement for ST-246 on the basis of the LATS because "a reasonable negotiator in the position of PharmAthene would not have concluded that the LATS, as attached to the Bridge Loan and Merger Agreements, manifested agreement on all of the license terms that SIGA and PharmAthene regarded as essential" and, "therefore, such a

---

[22] PharmAthene asserted a cross-appeal for "specific performance granting it a license in accordance with the LATS's terms because the LATS is an enforceable contract." *Supr. Ct. Op.*, 67 A.3d at 353. As previously noted, regarding that and the other claims subject to PharmAthene's cross-appeal, the Supreme Court observed that "[a]ll those claims are alternative contentions advanced in the event we do not affirm the Vice Chancellor's judgment. Because we affirm the Vice Chancellor's finding that SIGA is liable for breaching its contractual obligations to negotiate in good faith in accordance with the LATS's terms, we do not reach these arguments." *Id*.

reasonable negotiator would not have believed that the LATS concluded the parties' negotiations."[23] In that sense, I agree with SIGA that my conclusions regarding specific performance are, at this juncture, the "law of the case," and that this Court lacks the authority to modify those holdings.[24]

Even assuming, however, that I could reconsider my previous decision as to specific performance, PharmAthene has not presented any persuasive reason that would cause me to do so.[25] At trial, "[t]he primary form of relief PharmAthene s[ought] [wa]s specific enforcement of a license agreement that strictly conforms to the LATS."[26] Consequently, the Post-Trial Opinion addressed that issue directly and thoroughly.

---

23 *Post-Trial Op.*, 2011 WL 4390726, at *18 (Del. Ch. Sept. 22, 2011).

24 Although the Supreme Court also did not address my conclusion that PharmAthene was not entitled to recover damages under the doctrine of unjust enrichment, PharmAthene made no serious argument that that decision should be reevaluated. I note, however, that as with specific performance, the Supreme Court Opinion did not reverse my reasoning for rejecting PharmAthene's unjust enrichment claim. As a result, I arguably would have been precluded from reconsidering that holding had PharmAthene pressed it as an issue in the remand proceedings.

25 In the Post-Trial Opinion, I also denied PharmAthene's request for an order of specific performance requiring SIGA to continue to negotiate, in good faith, a license agreement with PharmAthene in accordance with the LATS. *Post-Trial Op.*, 2011 WL 4390726, at *35. In briefing on remand, PharmAthene argued that "no further negotiations are necessary" because any remaining terms beyond the LATS "are not material and can be supplied by the Court as part of the exercise of its equitable authority." SIGA's Remand Reply Br. 49. That argument, however, merely recasts PharmAthene's request that I revisit my prior decision not to order specific performance of the LATS. For the reasons stated in the text above, I decline that request.

26 *Post-Trial Op.*, 2011 WL 4390726, at *11.

The Supreme Court's holding that neither SIGA nor PharmAthene could propose terms that were inconsistent with the LATS does not compel a different conclusion. I recognized explicitly in the Post-Trial Opinion that the LATS was intended to capture "the key economic components" of any license agreement to which the two sides would agree regarding ST-246. I also held, however, that such agreement as to the key economic terms was insufficient for purposes of ordering specific performance because "[t]he issues SIGA and PharmAthene implicitly left for future negotiations [*i.e.*, those issues beyond the key economic terms] involve[d] far more than simply 'unresolved administrative issues'" and that "PharmAthene ha[d] not proven that the parties believed they had reached agreement on all essential terms."[27] Therefore, although the Supreme Court's decision made it more certain that the key economic terms of any ST-246 license would closely track those set out in the LATS, it did not disturb my post-trial finding that PharmAthene was not entitled to specific performance of the LATS.

The same logic applies to PharmAthene's assertion that specific performance is an appropriate remedy because the passage of time has mooted the material omissions in the LATS that I found rendered it insufficient to serve as a license agreement itself. The Supreme Court Opinion did not fill any of those gaps. In addition, notwithstanding PharmAthene's assurances to the contrary, I am not persuaded that the LATS contains all of the elements that the two parties would consider necessary to include in a license agreement for ST-246 because SIGA unilaterally has resolved some of the open issues

---

[27] *Id.* at *18.

through its development of ST-246 to date. Moreover, even assuming counterfactually that with the passage of time there no longer are any "material" terms missing from the LATS and that, as a result, the LATS now could constitute an enforceable license agreement between SIGA and PharmAthene, I still consider specific performance inappropriate because it no longer is feasible to enforce the parties' intended bargain.

Had SIGA and PharmAthene actually consummated a license agreement in accordance with the LATS, that agreement would have entrusted PharmAthene with the primary responsibility for developing ST-246. One of the most significant consequences of SIGA's bad faith breach of its obligation to negotiate a license agreement in good faith is that up until today, SIGA, not PharmAthene, has controlled the development of ST-246. PharmAthene legitimately can claim to have suffered serious damage from being deprived wrongfully of the opportunity to control development of a promising drug such as ST-246. At the same time, as compared to the parties' presumed license agreement, SIGA has expended significantly more time and resources to develop ST-246 than the two sides had contemplated, and PharmAthene has expended significantly less. Accordingly, ordering SIGA to transfer control of ST-246 to PharmAthene now, and allowing PharmAthene to enjoy the fruits of SIGA's labors in developing ST-246 without undertaking most of the obligations that were expected of it, would result in the enforcement of a drastically different agreement than the one SIGA and PharmAthene

actually contemplated.[28] PharmAthene has cited no authority that supports the use of specific performance in circumstances such as these.

Therefore, PharmAthene has two potential remedies available to it in this remand proceeding: (1) lump sum expectation damages; and (2) an equitable payment stream based on the terms of the LATS.[29] I turn next to an analysis of the merits of those respective potential damages awards.

II. ANALYSIS

Awarding PharmAthene an equitable payment stream that is consistent with the terms of the LATS conceivably would be appropriate as a contractual remedy only if I still conclude, on reconsideration, that an award of lump sum expectation damages is too speculative; that is, only if I find PharmAthene has no adequate remedy at law. As such, I address the availability of a lump sum expectation damages award first. Because I

---

[28] There also could be other complications in terms of interested third parties such as the Biomedical Advanced Research Development Authority ("BARDA"). For example, the relief PharmAthene seeks could include having this Court order the transfer of the BARDA contract from SIGA to PharmAthene or, at least, ordering SIGA and PharmAthene to execute a license agreement in which PharmAthene becomes the controller of ST-246, which also could affect the BARDA contract, which represents ST-246's best commercialization opportunity to date.

[29] If I find PharmAthene has not shown that it is entitled to either of these potential remedies, PharmAthene would be entitled to an award of reliance damages for the money it expended attempting to negotiate a license agreement with SIGA in the fall and winter of 2006. *Ramone v. Lang*, 2006 WL 905347, at *16 n.86 (Del. Ch. Apr. 3, 2006). Based on the evidence presented at trial, however, PharmAthene's reliance damages here appear to be in the range of only about $200,000, a nominal sum relative to PharmAthene's claimed damages of hundreds of millions of dollars.

ultimately conclude that PharmAthene is entitled to an award of lump sum expectation damages, I need not, and do not, reach the issue of whether PharmAthene could be entitled to an award of an equitable payment stream for SIGA's breach of contract.

A. Basis for Reconsidering Expert Testimony

In the Post-Trial Opinion, I held that much of the expert testimony presented with respect to lump sum expectation damages was unhelpful. Based on the Supreme Court Opinion, I am persuaded that I should reevaluate my earlier holding in that regard. As noted *supra*, in its decision, the Supreme Court explicitly invited me to reconsider my prior holding that an award of lump sum expectation damages to PharmAthene for SIGA's bad faith breach was unduly speculative. To be meaningful, any such reconsideration necessitates a reexamination of the expert testimony that was presented in support of, and opposition to, an award of expectation damages.

In that regard, I also am mindful of the Supreme Court's comment regarding my decision in the Post-Trial Opinion to limit my award of expert witness fees to account for those portions of expert evidence I found unhelpful when determining the initial damages award. On that point, the Supreme Court stated:

> On remand, the Vice Chancellor shall redetermine his damage award in light of this opinion and is free to reevaluate the helpfulness of expert testimony. Therefore, we reverse the award of attorneys' fees and expenses so that the Vice Chancellor may determine on remand the proper award consistent with this opinion.[30]

---

[30] *Supr. Ct. Op.*, 67 A.3d 330, 353 (Del. 2013).

The Court's statement reinforces my conclusion that it is important on remand to take a fresh look at the expert testimony relevant to the issue of expectation damages.

Two other salient factors also favor my reconsidering the merits of the expert evidence on damages presented at trial. First, since I issued the Post-Trial Opinion, SIGA has been awarded a contract to sell ST-246 to the United States government via BARDA. The parties dispute the extent to which I can and should consider an event such as this, which occurred several years after SIGA's bad faith breach. Having considered the competing arguments and relevant case law, I have decided that this Court should take note of SIGA's success in procuring a contract with BARDA (*i.e.*, its actual commercialization of ST-246). In particular, that fact mitigates or possibly eliminates some of the concerns I expressed in the Post-Trial Opinion regarding ST-246's future prospects, including the possibility that the drug might not generate any profits at all.[31]

---

[31] *See Post-Trial Op.*, 2011 WL 4390726, at *37 (Del. Ch. Sept. 22, 2011) ("The evidence adduced at trial proved that numerous uncertainties exist regarding the marketability of ST–246 and that *it remains possible that it will not generate any profits at all*. These uncertainties relate to, among other things, regulatory matters, questions of demand, price, competition, and the parties' marketing competency.") (emphasis added).

In that regard, I also note that evidence was presented at the remand hearing that the BARDA contract has a dollar value of over $460 million, and, to date, SIGA has received over $160 million of that money in payments from BARDA. Because the BARDA contract contains certain contingencies related to what, if any, formulation of ST-246 eventually will obtain FDA approval, SIGA has elected not to recognize as revenue any of the payments it has received from BARDA to date. PharmAthene vigorously disputes the propriety of that non-recognition as an accounting matter. While I take no position as to the appropriateness of SIGA's revenue recognition policies, I do find it at least tangentially relevant to this dispute that SIGA undoubtedly has started to receive

Therefore, I am convinced that in these proceedings on remand a reevaluation of what the parties' reasonable ST-246 commercialization expectations were at the time of SIGA's breach is both appropriate and necessary.

Another factor that supports reconsideration of the extent to which PharmAthene's claimed lump sum damages are speculative is the Supreme Court's clarification of the relevant law applicable to this case. Before the Supreme Court's Opinion, it was an open question whether, as a matter of law, SIGA's bad faith breach of a "Type II" agreement could support an award of expectation damages. Although I gave serious consideration to PharmAthene's request for a lump sum damages award, and the evidence in support of and in opposition to that request, the legal uncertainty regarding the availability of expectation damages was another factor that caused me to focus primarily on crafting an equitable remedy that would account for SIGA's liability for both breach of contract and promissory estoppel. In the course of reversing my finding regarding promissory estoppel and remanding my damages award for reconsideration, the Supreme Court stated definitively that expectation damages potentially could be awarded for SIGA's bad faith conduct. In the same vein, the Supreme Court also emphasized the central role of the contract as the source of any remedy I could award for SIGA's breach.[32] Based on the

---

significant sums of money related to ST-246's commercialization. The supplemental evidence presented on remand also proves by a preponderance of the evidence that it no longer is reasonable or realistic to infer that ST-246 will not generate any profits at all.

[32] *Supr. Ct. Op.*, 67 A.3d 330, 348 (Del. 2013) ("[A] Vice Chancellor must look to the contract as the source of a remedy on the breach of an obligation to negotiate

Supreme Court's clarification of the law and its proper application, I consider it necessary to reexamine the facts and expert reports that pertain to PharmAthene's request for an award of lump sum expectation damages.[33]

B. Legal Standard for Expectation Damages

Under Delaware law, the standard remedy for breach of contract is based on the reasonable expectations of the parties that existed before or at the time of the breach.[34]

---

in good faith."); *id.* ("We now turn to the question of what is the proper *contractual remedy* for breach of an agreement to negotiate in good faith where the court finds as fact that the parties, had they negotiated in good faith, would have reached an agreement.") (emphasis added).

[33] The Supreme Court's clear indication that any remedy to which PharmAthene may be entitled is contractual in nature also persuades me that I should be chary about pursuing a more amorphous damages award in the form of an equitable payment stream. The Supreme Court's affirmance of my holding as to SIGA's liability for breach of contract but reversal of my damages award in the form of an equitable payment stream, even though I previously held that lump sum expectation damages were too speculative, suggests that the Court is dubious about the propriety of a payment stream award, either as contemplated in the Post-Trial Opinion or in some modified form, as a remedy in this breach of contract case. Moreover, the two cases that PharmAthene relies on to support its assertion that expectation damages can be awarded as a payment stream, *ID Biomedical Corp. v. TM Techs., Inc.*, 1995 WL 130743 (Del. Ch. Mar. 16, 1995) and *Cura Fin. Servs. N.V. v. Elec. Payment Exch., Inc.*, 2001 WL 1334188 (Del. Ch. Oct. 22, 2001), are inapposite. In *ID Biomedical*, the Court imposed a constructive trust over the defendant's property rights under certain patent applications because the defendants had obtained, and transferred, those rights by fraud. 1995 WL 130743, at *17. No such equitable basis exists in this case to award a constructive trust for SIGA's breach, albeit in bad faith, of its contractual obligations to PharmAthene. As to *Cura Financial Services*, it appears that the remedy the Court awarded there was not based solely on a breach of contract, but also on tortious interference and, to a lesser extent, *quantum meruit* as well. 2001 WL 1334188, at *23–24. The Supreme Court's Opinion makes clear that SIGA's only remaining basis for liability here is breach of contract.

"This principle of expectation damages is measured by the amount of money that would put the promisee in the same position as if the promisor had performed the contract."[35] One measure of expectation damages is a party's lost profits. An award of lost profits, however, like any expectation damages award, "presupposes that the plaintiff can prove damages with reasonable certainty."[36]

The issue then becomes what does it mean to be able to prove damages with reasonable certainty? "Responsible estimates of damages that lack mathematical certainty are permissible so long as the court has a basis to make such a responsible estimate."[37] Moreover, this Court has recognized that:

> Proof of the fact of damages in a lost profits case means proof that there would have been some profits. If the plaintiff's proof leaves uncertain whether plaintiff would have made any profits at all, there can be no recovery. But once this level of causation has been established for the fact of damages, less certainty (perhaps none at all) is required in proof of the amount of damages. While proof of the fact of damages must

---

34 *Duncan v. Theratx, Inc.*, 775 A.2d 1019, 1022 (Del. 2001).

35 *Id.*

36 *Supr. Ct. Op.*, 67 A.3d 330, 351 n.99 (Del. 2013). In that regard, "[i]t is well-settled law that 'a recovery for lost profits will be allowed only if their loss is capable of being proved, with a reasonable degree of certainty. No recovery can be had for loss of profits which are determined to be uncertain, contingent, conjectural, or speculative.'" *Id.* (quoting *Callahan v. Rafail*, 2001 WL 283012, at *1 (Del. Super. Mar. 16, 2001)).

37 *Beard Research, Inc. v. Kates*, 8 A.3d 573, 613 (Del. Ch. 2010), *aff'd sub nom. ASDI, Inc. v. Beard Research, Inc.*, 11 A.3d 749 (Del. 2010).

> be certain, proof of the amount can be an estimate, uncertain, or inexact.[38]

The circumstances surrounding a breach also can affect the level of proof required to sustain an award of expectation damages. For example:

> Doubts [about the extent of damages] are generally resolved against the party in breach. A party who has, by his breach, forced the injured party to seek compensation in damages should not be allowed to profit from his breach where it is established that a significant loss has occurred. *A court may take into account all the circumstances of the breach, including willfulness, in deciding whether to require a lesser degree of certainty, giving greater discretion to the trier of the facts.* Damages need not be calculable with mathematical accuracy and are often at best approximate.[39]

PharmAthene argues that it is entitled to an award of the lost profits it would have earned from the sale of ST-246 had SIGA not acted in bad faith and breached its contractual obligations. The relevant inquiry, therefore, is at the time of SIGA's breach in December 2006,[40] what were the parties' reasonable expectations regarding

---

[38] *Agilent Techs., Inc. v. Kirkland*, 2010 WL 610725, at *29 n.271 (Del. Ch. Feb. 18, 2010) (quoting Robert L. Dunn, Recovery of Damages for Lost Profits § 1.3 at 11 (6th ed. 2005)). *Accord* Williston on Contracts § 64:9 (4th ed. 2000) ("Thus, it is now well established that the uncertainty that prevents recovery is uncertainty as to the fact of damage and not as to its amount.").

[39] *Cura Fin. Servs. N.V. v. Elec. Payment Exch., Inc.*, 2001 WL 1334188, at *20 (Del. Ch. Oct. 22, 2001) (quoting Restatement (Second) of Contracts § 352 cmt. a (1981)). *See also Beard Research, Inc.*, 8 A.3d at 613 ("Public policy has led Delaware courts to show a general willingness to make a wrongdoer 'bear the risk of uncertainty of a damages calculation where the calculation cannot be mathematically proven.'") (quoting *Great Am. Opportunities, Inc. v. Cherrydale Fundraising, LLC*, 2010 WL 338219, at *23 (Del. Ch. Jan. 29, 2010)).

[40] There does not appear to be any serious dispute that the date of the breach was in December 2006. In briefing during the remand proceedings, SIGA tacitly

PharmAthene's ability to realize profits from the sale of ST-246 under a license agreement in accordance with the LATS.[41] I address that issue next.

C. Appropriate Use of Post-Breach Developments

Before turning to the substance of PharmAthene's expectation damages claim, I first must resolve the issue of what, if any, consideration should be given to events that have occurred since SIGA's bad faith breach in December 2006, the time as of which damages must be measured. As SIGA itself recognizes, "the Court is not absolutely barred from considering post-breach evidence."[42] Furthermore, case law suggests that the Court can consider post-breach evidence "in order to aid in its determination of the

---

recognized that the date of the breach was December 2006. *See*, *e.g.*, SIGA's Opening Br. on Remand at 20 ("As an initial matter, the BARDA contract is irrelevant. Expectation damages are calculated as of the breach, and the BARDA contract was not and could not have been known as of December 2006."). In terms of a more specific date, PharmAthene used December 20, 2006. Because SIGA did not contest that date seriously, I have used it in the few instances where a specific date was useful.

41 PharmAthene was and continues to be harmed by SIGA's bad faith breach of its contractual obligations. That harm includes, but is not limited to, the opportunity PharmAthene would have had to develop a successful smallpox antiviral and the reputational enhancement and government funding attendant to such development. Based on the damages case that it presented at trial, PharmAthene has shown, at a minimum, that one of the ways in which it was harmed was that, at the time of SIGA's breach, PharmAthene was poised to commercialize profitably ST-246 in a way that it was reasonably certain would be profitable and that SIGA deprived it of that opportunity.

42 SIGA Answering Br. on PharmAthene's Mot. to Reopen the Record 12 (July 30, 2013).

proper expectations as of the date of the breach."[43] Therefore, to the extent that evidence of any post-breach events in this case are helpful to the Court in assessing the parties' reasonable expectations for ST-246's commercialization prospects in December 2006, I can and have considered that evidence. In all other respects, however, post-breach events are irrelevant to the appropriate measure of PharmAthene's expectations damages as of SIGA's breach in December 2006. Accordingly, I have relied only sparingly on post-breach information in my analysis of PharmAthene's damages claim and explicitly have identified any such evidence I have considered. Thus, for example, while it is appropriate to consider the fact that, to date, SIGA has sold "X dollars" worth of ST-246 to evaluate whether at the time of the breach PharmAthene had a reasonable expectation of commercializing ST-246, it would be inappropriate to use "X dollars" as the basis of a damages award because it was neither known nor knowable at the time of SIGA's breach.

D. PharmAthene's Damages Model

To support its claim that it is entitled to an award of expectation damages for SIGA's bad faith breach of its contractual obligations, PharmAthene offered the expert

---

[43] *Comrie v. Enterasys Networks, Inc.*, 837 A.2d 1, 17 (Del. Ch. 2003). *See also Cura Fin. Servs. N.V. v. Elec. Payment Exch., Inc.*, 2001 WL 1334188, at *23 (determining damages, in part, by "clinging to known facts" including post-breach events); *Honeywell Int'l, Inc. v. Hamilton Sundstrand Corp.*, 378 F. Supp. 2d 459, 465 (D. Del. 2005) ("Indeed, the flexibility offered by the 'book of wisdom' [*i.e.*, the knowledge that particular events actually occurred after the date of the wrong] is as important in the context of patent law as it is in the context of contract law because it discourages infringement.").

report and testimony at trial of Jeffrey L. Baliban.[44] In his report, Baliban presented damages calculations for six different scenarios using the discounted future earnings method. Of those six, I find most relevant the one in which Baliban calculated PharmAthene's damages according to the terms of the LATS based on facts that purportedly were known as of December 20, 2006 (the "Basis 1 LATS Scenario").[45] Using that scenario, Baliban calculated PharmAthene's expectation damages to be $1.07 billion.[46]

---

[44] Baliban currently serves as a Senior Vice President in the Securities & Finance practice of National Economic Research Associates, Inc. ("NERA"), a global economic and valuation consulting firm, and also is a lead member of the firm's Complex Commercial Dispute section. For approximately 30 years, Baliban's practice has focused on forensic accounting and economic valuation. Baliban has significant experience serving as a valuation expert in litigation, having testified in various federal, state, and municipal jurisdictions, and I found his testimony and reports in this litigation to be credible and helpful.

[45] Baliban's other calculations use either a different basis of damages than the LATS or information that only became available after December 2006, or both. Based on the Supreme Court Opinion, which focuses on the LATS, as well as longstanding precedent that expectation damages are measured at the time of the breach, these other calculations generally are not helpful in my analysis of PharmAthene's expectation damages at the time of SIGA's breach. The one limited exception is Baliban's scenario that focused on damages according to the terms of the LATS based on facts that were known as of November 2009. Baliban referred to this scenario as his Basis 2 LATS scenario. As discussed *infra*, I have considered that scenario as it relates to a few of the additional facts known as of November 2009 in connection with my damages analysis here.

[46] The same calculations implied that SIGA, through the royalty payments it was to receive in accordance with the LATS, would be entitled to earnings of $466 million. Dr. Keith Ugone, SIGA's damages expert, argued that Baliban's calculations were unreasonable, *per se*, because his resulting damages number varied so significantly from SIGA's market capitalization of $139.07 million on December 20, 2006, the date of SIGA's breach. I give some credence, however,

The starting point for Baliban's damages calculation was a financial model prepared by PharmAthene in early 2006 while the parties still were negotiating a potential merger (the "PHTN model"). PharmAthene shared this model with SIGA in 2006, and SIGA appears to have used it in some of the parties' subsequent negotiations. The PHTN model projected the quantity and price of ST-246 sales to the U.S. government and foreign governments over the ten year period from 2008 to 2017. After reviewing those estimates, Baliban concluded that from 2008 to 2017, PharmAthene would have sold a total of approximately 91.9 million courses of ST-246,[47] at a price of $100 per course.[48] Baliban then subtracted PharmAthene's projected costs for ST-246 and used a "probability of success" factor of 84% to risk-adjust PharmAthene's projected earnings to account for the possibility that PharmAthene would not be successful in commercializing ST-246. Finally, Baliban applied a discount rate of 23.1% to PharmAthene's risk-adjusted earnings to arrive at a net present value for the profits

---

to Baliban's explanation that, at the time of the breach, there likely was not an efficient market for SIGA's thinly traded stock and, as such, SIGA's market capitalization at the time probably did not reflect accurately and completely SIGA's future potential earnings from ST-246. JTX 151 at 20-22. Therefore, I do not find SIGA's market capitalization at the time of the breach to be particularly persuasive evidence of what the reasonable commercial value of ST-246 was at that time.

47 As discussed in more detail *infra*, Baliban projected that roughly an equal number of treatments (also referred to as "courses") that were projected to be sold to the U.S. government also would be sold to foreign governments or the rest of the world or "ROW", as the parties sometimes referred to such foreign sales.

48 In his Basis 1 LATS model, Baliban increased this $100 figure by 3% every year from 2008 to 2017 to account for inflation.

PharmAthene lost by being deprived of the opportunity to develop and sell ST-246 in accordance with the LATS.

1. The Parties' commercialization expectations for ST-246 in December 2006

To determine PharmAthene's reasonable profit expectancy from ST-246 at the time of SIGA's bad faith breach, including whether it was reasonable for PharmAthene to believe it ever would succeed in commercializing ST-246, it is necessary to consider the parties' reasonable expectations at that time regarding several factors. Although there are many conceivable factors that could have affected the future commercial viability of ST-246 as of December 2006, based on the testimony and expert reports proffered by both parties in relation to damages, I conclude that PharmAthene's expectations as to ST-246's future prospects were driven primarily by four factors. Those factors were: (1) the likelihood that ST-246 ever would be sold commercially in meaningful quantities; (2) the timing of when any such sales would begin; (3) the price at which ST-246 would be sold; and (4) the quantity of ST-246 that would be sold. I analyze these factors in turn.

a. PharmAthene had a reasonable expectancy that ST-246 would be a commercially viable product as of December 2006

At the time of SIGA's contractual breach, ST-246 was still in the development stage and had never been sold. To demonstrate that it would be entitled to an award of expectation damages in the form of the lost profits it would have earned from the sale of ST-246, therefore, PharmAthene must overcome the initial hurdle of proving adequately that, as of December 2006, it had a reasonable expectation that ST-246, in fact, would be sold commercially.

Unsurprisingly, the parties have proffered vastly divergent perspectives regarding what reasonably could have been expected as to ST-246's chances for commercial success in December 2006. SIGA argues that it was both unknown and unknowable in December 2006 whether ST-246 ever would be sold commercially, let alone with any meaningful success. According to SIGA, the uncertainty in this regard stemmed largely from the fact that ST-246 is a pharmaceutical drug. As a pharmaceutical drug, ST-246 requires United States Food and Drug Administration ("FDA") approval before it can be sold to the public. SIGA avers that at the time of the breach it was entirely speculative whether ST-246 would receive FDA approval, as evidenced by, among other things, the fact that now, nearly eight years later, it is still unknown when or if the FDA will approve it.[49] SIGA also notes that the economic model created by PharmAthene's damages expert, Baliban, to calculate PharmAthene's damages is highly sensitive to changes in the probability that ST-246 would be commercialized. According to SIGA, therefore, the high degree of uncertainty surrounding whether ST-246 actually could be launched commercially rendered Baliban's damages calculation impermissibly speculative.

PharmAthene responds that SIGA overemphasizes the significance of FDA approval to ST-246's prospects for successful commercialization. As PharmAthene

---

[49] In addition, because ST-246 is a potential antidote for smallpox, SIGA had to attempt to obtain FDA approval of it by relying on the so-called "Animal Rule" under which certain studies are conducted using animals, rather than people, because it is not feasible to use human beings in the studies. Use of this acceptable, but relatively uncommon, path to FDA approval arguably added an extra layer of uncertainty to FDA approval of ST-246 in December 2006.

observes, at the time of SIGA's bad faith conduct, both parties understood that, at least initially, the U.S. government would be the most likely and significant purchaser of ST-246 based on its desire to bolster its defenses against potential bioterrorism attacks, including attacks involving smallpox. PharmAthene avers further that both parties believed and understood that the U.S. government's criteria for purchasing such bioterrorism countermeasures were less stringent than those required for FDA approval, and that ST-246 was well positioned to meet those lesser criteria when SIGA committed its breach. PharmAthene further asserts that SIGA's contention that it was speculative in December 2006 whether ST-246 would meet the requisite criteria for purchase by the U.S. government (or any other entity) was belied by the facts established at trial and upheld by the Supreme Court on appeal. These facts include, but are not limited to, SIGA's own confidence in ST-246's prospects, which caused it internally to value ST-246 at the time of the breach at between three and five billion dollars, and SIGA's development of "seller's remorse" which ultimately motivated its bad faith conduct.

Based on the evidence presented at trial, I conclude that PharmAthene has established by a preponderance of the evidence that, at the time of SIGA's breach, the parties reasonably had expected that ST-246 would be commercialized in the near future. Although officially BARDA did not come into existence until roughly contemporaneously with SIGA's bad faith conduct, the record supports a reasonable inference that both SIGA and PharmAthene knew of BARDA's imminent establishment. Equally significant is the fact that, as of the date of the breach, the U.S. government already had outlined criteria for procuring pharmaceuticals for the Strategic National

Stockpile ("SNS"), the target market for ST-246.[50] These requirements did not include FDA approval of the drug being considered for acquisition.[51]

In that regard, SIGA's criticisms of the "probability of success" figure Baliban used in his damages model largely miss the mark. Baliban used 84% as the probability that ST-246 would meet the necessary U.S. regulatory approvals.[52] This number was derived from a report prepared by PharmAthene's pharmaceutical expert, Dr. Carl Peck. Dr. Peck opined that, at the time of SIGA's breach, the likelihood that ST-246 would receive *FDA approval* was between 84% and 95%.[53] Dr. Peck also stated, however, that the probability that ST-246 would meet the BARDA criteria for *purchase into the SNS* was over 95%.[54] According to SIGA, Dr. Peck had no reasonable basis to project the probability of ST-246's FDA approval, an inherently uncertain process, and by incorporating Dr. Peck's conclusion into his model, Baliban rendered his damages calculation unreasonably speculative. This argument is without merit because Baliban's damages model was premised on BARDA's acquisition of ST-246, not FDA approval of

---

50 JTX 140 at 15–23.

51 *Id.* The evidence shows that the U.S. government has procured both FDA and non-FDA approved pharmaceuticals for use in the SNS.

52 JTX 150 at 24.

53 JTX 140 at 5.

54 *Id.* at 23–24. The basis for this conclusion was that the criteria for procurement into the SNS were, and evidently continue to be, significantly less onerous than the criteria for FDA approval. The evidence presented at trial supports Dr. Peck's conclusion in this regard.

the drug. Baliban also used the low end of Dr. Peck's FDA approval probabilities, rather than Dr. Peck's 95% SNS acquisition probability, so as to present a "conservative" estimate of PharmAthene's damages. Therefore, even assuming that SIGA is correct that projecting the probability of FDA approval for a drug in development is inherently speculative, that fact does not compel the conclusion that Baliban's calculations, based on the probability of ST-246 meeting the U.S. government's SNS acquisition criteria, also are inherently speculative.[55]

The key issue then was whether Baliban's use of an 84% "probability of success" factor was reasonable or unduly speculative. Based on the evidence presented at trial, I find that PharmAthene had a reasonable expectation at the time of the breach that the U.S. government soon would begin acquiring ST-246 for use in the SNS. At the time of the breach, ST-246 apparently had been developed sufficiently to be eligible for acquisition for the SNS under the guidelines set out in The Project Bioshield Act of 2004 passed by the U.S. Congress.[56] By December 2006, ST-246 not only had achieved a number of material developmental milestones, but also had received millions of dollars in U.S. government funding based on both its potential and its achievement of tangible

---

[55] Accordingly, I find SIGA's citation to *Militrano v. Lederle Laboratories*, 3 Misc. 3d 523, 540 (N.Y. Sup. Ct. 2003) for the proposition that an expert cannot predict FDA approval of a drug without "engaging in rank speculation" unavailing here.

[56] JTX 140 at 15–23.

milestones.[57] Since BARDA was established in late 2006 and entrusted with determining the criteria for drugs to be eligible for the SNS, those criteria actually have been lowered.[58] The use of criteria considerably less demanding than those for FDA approval to determine eligibility for purchase by the U.S. essentially confirms PharmAthene's expectations at the time of SIGA's breach that ST-246 would satisfy the SNS criteria.[59]

It also is significant that, more recently, BARDA, has agreed to procure at least 1.7 million courses of ST-246 for the SNS despite the fact that ST-246 still has not obtained FDA approval. Although the ST-246 sale to BARDA happened several years after the breach occurred, the fact that ST-246 actually was sold to its intended purchaser further persuades me that, as of December 2006, PharmAthene did have a reasonable expectation that the U.S. government would become a buyer of ST-246 in the relatively near future.

---

57 JTX 150 at 8–10. These milestones included ST-246 becoming the first drug to demonstrate 100% protection against the human smallpox virus in a primate trial conducted at the Center for Disease Control in October 2006, and ST-246 demonstrating protection against the monkeypox virus in two primate trials in November 2006. *Id*. at 9.

58 JTX 140 at 18.

59 SIGA argues that because BARDA did not exist when the breach occurred, it was impossible to know what eligibility requirements it would institute for SNS pharmaceuticals. Nothing in the evidence of what was known at the time of the breach, however, suggests that BARDA was likely to make SNS eligibility more difficult. To the contrary, it appears that since its establishment, BARDA consistently has reduced the eligibility criteria for SNS drugs.

All of those facts are in addition to SIGA's own conduct and beliefs in late 2006 that ultimately contributed to its breach in December 2006. By late 2005, SIGA valued ST-246 *conservatively* at approximately $1 billion.[60] In mid-to-late 2006, as ST-246 began to look "more and more like a multi-billion dollar drug," SIGA began experiencing "seller's remorse," which was the primary impetus for its bad faith conduct later.[61] Thus, at the time of SIGA's breach, PharmAthene was not alone in reasonably believing that ST-246 imminently would be commercialized (with great success). SIGA, the company that then was in control of the drug and had unique insights into its development and prospects, had a similar, if not identical, outlook for the drug. I conclude, therefore, that, as of December 2006, ST-246 objectively had a very high likelihood of being commercialized in the near future via sales to the SNS, and that Baliban's use of an 84% "probability of success" factor was both reasonable and supported by the evidence.

b. PharmAthene had a reasonable expectation at the time of the breach that ST-246 sales would begin by 2010 at the latest

The second significant factor relating to PharmAthene's claim for lump sum expectation damages is the timing of when sales of ST-246 would begin. SIGA asserts

---

60 *Supr. Ct. Op.*, 67 A.3d 330, 334 (Del. 2013).

61 *Id.* at 347. *See also Post-Trial Op.*, 2011 WL 4390726, at *24 (Del. Ch. Sept. 22, 2011) ("Indeed, by the end of September 2006, SIGA had secured independent government funding to support the remaining development of ST–246, which it believed made PharmAthene's continued involvement unnecessary."); *id.* at *25 ("By the end of September 2006, the tables had turned. It then appeared that ST–246 would be a fantastic success and that SIGA could obtain all the capital it might need in the future from sources independent of PharmAthene. Predictably, Hruby quickly claimed that SIGA deserved all the credit for ST–246's good fortune and determined that SIGA had no need for PharmAthene whatsoever.").

that, even assuming ST-246 met the U.S. government's criteria for purchase in December 2006, there was no way of knowing at that time when the government would begin purchasing the drug. In this regard, SIGA also relies on the fact that while Baliban assumed that ST-246 sales would begin in 2008, the first courses of ST-246 actually were not delivered until the first quarter of 2013.

PharmAthene defends Baliban's use of a 2008 start date for sales as reasonable because he based it on what the parties themselves had used as a start date during their negotiations over the license agreement. Relying on its expert, Dr. Peck, PharmAthene also contends that, to the extent there has been a delay in the sale of ST-246 relative to Baliban's projections, the delay is a function of SIGA's failure to develop the drug efficiently or properly due to its lack of experience in commercializing pharmaceuticals. But for SIGA's breach, PharmAthene would have controlled ST-246's development. According to PharmAthene, it would have used its experience to develop the drug more expeditiously.

Initially, I note that although I credit Dr. Peck's testimony regarding the likelihood that ST-246 would be procured for use in the SNS, Dr. Peck did not offer any persuasive and direct insight as to *when* that procurement would occur. Stated differently, the fact that at the time of the breach the U.S. government reasonably appeared to be a likely purchaser of ST-246 does not provide much insight into when the U.S. government actually would begin making those purchases.

Beyond the expectations of the parties themselves, there is no persuasive evidence that sales of ST-246 to the U.S. government were going to begin in 2008. Although the

parties knew in December 2006 that the establishment of BARDA was imminent and that ST-246 likely was going to be eligible for BARDA acquisition almost immediately, it was unclear how long it would take BARDA to officially implement its standards for SNS acquisition, solicit proposals from drug makers for a smallpox pharmaceutical, and actually choose which smallpox drug or drugs it wished to acquire. In fact, it now appears that SIGA was not awarded the BARDA contract for ST-246 until after the January 2011 trial in this action. Therefore, although PharmAthene has established that at the time of SIGA's breach it had a reasonable expectation that it soon would begin selling ST-246 to the U.S. government, it has not demonstrated that it reasonably expected those sales would begin in 2008.

The question then becomes whether, at the time of the breach, there was sufficient information available to support a responsible and realistic estimate as to when sales of ST-246 to the U.S. government would begin. I conclude that there was, but that the evidence was not adequate to support Baliban's assumption that PharmAthene would have enjoyed sales as early as 2008. What was known at the time of the breach included that ST-246 had shown tremendous promise in preliminary studies, enabled SIGA to raise over $20 million in development funding, and had been granted "orphan drug" and "fast track" status by the FDA. These facts, among others, persuade me that, at the time of the breach, PharmAthene had a reasonable expectation that the U.S. government

would begin purchasing ST-246 for the SNS[62] within four years, *i.e.*, by 2010, at the latest. I adopt, therefore, 2010 as the year in which ST-246 sales to the U.S. government reasonably would have been expected to begin as of December 2006. Consequently, Baliban should have used 2010 as the commencement date for sales of ST-246 to the U.S. government rather than the more aggressive, and largely unjustified, 2008 start date he used in his model.

c. PharmAthene has established a reasonable expectancy of selling ST-246 to the U.S. government for $100 per course

Turning to the issue of price, in calculating PharmAthene's expectation damages, Baliban assumed that PharmAthene would sell ST-246 for $100 per course of treatment.[63] SIGA criticizes this assumption as lacking a sufficient factual basis. In response, PharmAthene argues that, at the time of the breach, SIGA and PharmAthene were negotiating with one another based on being able to sell ST-246 at $100 per course and that that amount was comparable to what the U.S. government had paid for other bioterrorism-related countermeasures.

---

62 I note again that FDA approval is not, nor does it appear ever to have been, required for a drug that is being considered by the U.S. government for SNS procurement. As of December 2006, it appears that for SNS acquisition it was required that the product in question "will be approved or licensed within 8 years." Whether a product met that requirement was dependent on "a judgment based on developmental status," including data regarding toxicology, animal studies of efficacy, and manufacturing capability. JTX 140 at 23. The evidence shows that it was more likely than not that as of December 2006, ST-246 would have passed muster under this judgment requirement.

63 JTX 150 at 21–22.

I find that PharmAthene has proven by a preponderance of the evidence that Baliban's assumption that PharmAthene could expect to sell ST-246 for $100 per course to the U.S. government was reasonable at the time of the breach.[64] Baliban made an independent assessment of the parties' assumption of a $100 per course price in their license agreement negotiations by analyzing examples of the U.S. government's purchase of pharmaceutical countermeasures.[65] This assessment revealed that the $100 per course figure comported with the government's prior purchases. It also is significant that the contract BARDA entered into with SIGA in 2011 to purchase ST-246 requires the government to pay *significantly* more than $100 per course.[66] Therefore, I conclude that PharmAthene has met its burden of demonstrating that, at the time of SIGA's breach, it

---

64 Baliban also assumed that the price would increase 3% annually after the initial sales of ST-246 to account for inflation. For example, if sales of ST-246 began in 2010, the price per course would be $100 in 2010, $103 in 2011, $106.09 in 2012, and so forth. I also conclude that, as of December 2006, this is a reasonable assumption. According to the Federal Reserve, changes in the Consumer Price Index (*i.e.*, the rate of inflation) from 2000-2006 averaged 2.77%, and was 2.7% in 2004, 3.4% in 2005, and 3.2% in 2006. The Federal Reserve Bank of Minneapolis, http://www.minneapolisfed.org/community_education/teacher/calc/hist1913.cfm (last visited Aug. 7, 2014). I may take judicial notice of this information because it is capable of accurate and ready determination by resort to sources whose accuracy cannot reasonably be questioned and is not subject to reasonable dispute. D.R.E. 201(d).

65 JTX 150 at 21, Ex. 7.

66 Under the BARDA contract, SIGA is eligible to receive at least $180 per course of ST-246.

had a reasonable expectation that it would be able to commercialize ST-246 for $100 per course.

d. PharmAthene has established with sufficient certainty the number of courses of ST-246 it reasonably expected to sell to the U.S. government at the time of the breach

Finally, I turn to an analysis of the sales quantity that Baliban projected in his damages model.[67] As stated *supra*, based on the record presented at trial it is more likely than not

---

[67] SIGA also has questioned the reasonableness of several other aspects of Baliban's damages model, including his cost projections (*i.e.*, cost of goods sold, general expenses, and research and development costs) and his discount rate. Having reviewed carefully the competing expert reports and the evidence presented at trial, I conclude that Baliban's estimates in these respects all were reasonable. Moreover, at least with respect to Baliban's cost projections, to the extent PharmAthene could not project those figures with certainty, such uncertainty was caused by SIGA's bad faith breach of its contractual obligations. Had SIGA negotiated in good faith, SIGA and PharmAthene would have reached a license agreement in which PharmAthene would have controlled ST-246's development and would have been in a position to know the exact amount of such cost figures. Additionally, there is no persuasive record evidence that, had PharmAthene been given control of ST-246, it would not have been able to secure funding or government grants at least at the same rate or amount as SIGA has done in developing ST-246 to date. In that regard, I already have determined that, as of December 2006, PharmAthene had greater experience and more trained personnel in the areas of drug development and drug regulatory matters than did SIGA. *See Post-Trial Op.*, 2011 WL 4390726, at *2 (Del. Ch. Sept. 22, 2011) (finding that SIGA sought to partner with PharmAthene because "SIGA also had never taken a drug to market and lacked much of the administrative infrastructure necessary to do so, including employees with expertise in areas such as regulatory or government affairs, quality assurance, quality control, clinical trials, manufacturing, and business development.").

Regarding the discount rate, SIGA, through Dr. Ugone, did not propose an alternative rate, but instead merely attempted to "poke holes" in Baliban's assumptions. The thrust of Dr. Ugone's criticisms in this respect is that Baliban purportedly failed to account for a proverbial laundry list of company, industry, and ST-246 specific risks. JTX 154 at 51–57. I find, however, that Baliban's

that, at the time of SIGA's breach in December 2006, PharmAthene had a reasonable expectation that it would be able to commercialize ST-246 in the relatively near future. The actual extent to which PharmAthene would have commercialized ST-246 (*i.e.*, the quantity of ST-246 it would have sold) is a key element of PharmAthene's damages claim based on lost profits. Baliban estimated that between 2008 and 2012, PharmAthene would have sold a total of 29,806,490 courses of ST-246.[68] This figure was comprised of three components: sales to the SNS (14,778,000 courses), sales to the U.S. Department of Defense ("DoD") for the military (250,490 courses), and sales to the "rest of the world," ("ROW") meaning foreign governments for use in their own strategic biodefense stockpiles (14,778,000 courses).[69] I analyze, in turn, the reasonableness of Baliban's assumptions as to each of these components.

---

methodology for determining the discount rate was reasonable and accounts fairly for the risks PharmAthene would have faced in commercializing ST-246 at the time of the breach. Moreover, to the extent Baliban's discount rate does not adequately reflect the relevant risks at the time of the breach, the several limiting adjustments I have ordered to Baliban's model (discussed in more detail *infra*), including a reduction in ST-246 sales quantities, declining to recognize the projected stock replenishments based on a limited shelf life, and delaying the start of ST-246 sales to 2010, would offset more than adequately the consequences of such a deficiency.

68 JTX 150 at 16. More precisely, Baliban estimated that approximately 29 million courses would be sold in 2008, and delivered evenly over a four year period. Because ST-246 has a finite shelf life, Baliban assumed further that the SNS, DoD, and ROW would renew their purchases every four years to replace the expired ST-246 in their possession. In this section, I focus on the estimated size of PharmAthene's initial sale, and address the issue of renewed sales in Section II.D.1.d.4 *infra*.

69 *Id.*

1. Sales to the SNS

Baliban's estimate that 14,778,000 courses would be purchased for the SNS represents a nearly 4.5 million course increase over the 10,300,000 SNS procurement projections used in the PHTN model. The PHTN figure was derived by multiplying the size of the SNS smallpox vaccine stockpile at the time (estimated by PharmAthene to be 206 million) by the percentage of the United States population that was contraindicated for vaccination (five percent).[70] According to Baliban's research, both this figure and the contraindication rate were significantly understated. While the PHTN model assumed a five percent contraindication rate for smallpox, Baliban concluded the actual contraindication rate was four to six times higher (twenty to thirty percent).[71] Regarding the size of the stockpile, in 2002, the size of the SNS smallpox stockpile was roughly equal the size of the U.S. population.[72] Baliban used that relative relationship to estimate the size of the stockpile in 2006, by equating the size of the smallpox stockpile with the U.S. population as of July 1, 2005, the last date before December 2006 when that figure was updated by the U.S. Census Bureau. Consequently, Baliban concluded that a more

---

70 JTX 150 at 17. Contraindication refers to the fact that, for any number of reasons, a vaccine will not be effective at preventing or curing a disease for some particular individuals.

71 *Id.* Baliban's analysis was based on at least one academic article, a U.S. government publication, and SIGA's publicly disclosed financial information.

72 *Id.* According to Baliban's report, in 2002, the stockpile actually contained 286 million doses, compared with a U.S. population of approximately 287.7 million. *Id.* at 17. Thus, the estimated stockpile used in the PHTN model appears to have understated the size of the stockpile by approximately 80 million doses.

appropriate estimate of the size of the SNS smallpox stockpile at the time of SIGA's breach was approximately 295.5 million, which equaled the U.S. population as of July 1, 2005.[73]

Baliban adjusted his damages model to account for a portion of these underestimates. Although Baliban used the PHTN model's conservative five percent contraindication rate, he adopted 295.5 million, rather than 206 million, as a reasonable estimate of the proper size of the SNS smallpox stockpile, to derive an estimated sales quantity of ST-246 of 14.778 million courses.

Having considered the evidence presented at trial, I conclude that Baliban's model incorporates a reasonable estimate of PharmAthene's projected ST-246 sales at the time of SIGA's bad faith breach. The evidence supports a reasonable inference that the PHTN model understated significantly the size of the SNS smallpox vaccine stockpile. Based on the U.S. government's increased focus on combating bioterrorism between 2002 and 2006,[74] it is reasonable to conclude that the size of the stockpile continued roughly to track the U.S. population during that time period as Baliban assumed, rather than decline precipitously to 206 million as was assumed in the PHTN model. In that regard,

---

73 *Id.*

74 *See id.* at 3–6.

Baliban's 295.5 million estimate of the size of the SNS smallpox vaccine stockpile was reasonable and supported adequately by record evidence.[75]

I reach the same conclusion with respect to Baliban's assumption of a five percent contraindication rate. Importantly, both PharmAthene and SIGA appeared to incorporate this five percent number in their projections, which served as the basis for their negotiations. Moreover, Baliban confirmed independently that the likely contraindication rate for the smallpox vaccine stockpile actually was four to six times higher than that. Baliban's use of a conservative contraindication estimate of five percent also indirectly accounts for two of Dr. Ugone's criticisms of his model: (a) the failure to account for the emergence of competitive pharmaceuticals; and (b) the failure to account for the seven-year duration of the orphan drug status for which ST-246 had been designated.

According to Dr. Ugone, had Baliban accounted for either or both of those facts, his damages calculations would have been reduced materially because PharmAthene would have sold less ST-246 to the government and PharmAthene would not have sold

---

[75] Dr. Ugone criticized this adjustment because it was higher than what was included in the PHTN model, and, thus, did not reflect PharmAthene's reasonable expectations at the time of the breach, even though such an adjustment was knowable as of December 2006. I find this criticism unpersuasive. The underlying logic of the quantity assumption in the PHTN model was that the U.S. government would purchase enough ST-246 to account for the percentage of the smallpox vaccine stockpile that would be ineffective. That was PharmAthene's expectation at the time of the breach. The fact that PharmAthene evidently did not use the most accurate estimate of the size of the stockpile in the PHTN model (*i.e.*, 206 million versus 295.5 million) does not compel the conclusion that it lacked a reasonable expectancy of procuring anything more than five percent of the mistaken 206 million stockpile estimate.

ST-246 to the government for the entire 10 year damages calculation period. I consider the merits of these criticisms to be dubious. At the time of the breach, ST-246 appears to have been 8,000 times more effective than its closest competing product,[76] and SIGA points to no evidence that suggests that either the PHTN or Baliban's model included an assumption, explicit or implicit, that ST-246's orphan drug status was the driving force behind the selection of a ten year model.[77] Even assuming, however, that Baliban overstated PharmAthene's damages by failing to account for the effects of competition and only having a seven year exclusivity period to market ST-246, I conclude that it is more likely than not that any such overstatement was offset by the use of a conservative contraindication rate.[78]

---

[76] JTX 151 at 14–16. In addition to the fact that it was known publicly at the time of the breach that ST-246 had shown signs of being significantly more effective than potentially competing products, since SIGA's breach, it repeatedly has touted the superiority of ST-246 to alternative pharmaceuticals, even stating its belief in December 2009 that ST-246 had "at least a three-year lead compared to any other potential product candidate in regard to non-human primate efficacy testing." *Id.*

[77] Stated differently, the evidence does not support a reasonable inference that the PHTN model used a ten year period because of the seven year exclusivity period that is attendant to an orphan drug status designation.

[78] In addition, I find that the risks Dr. Ugone expressed concern about also are accounted for in a meaningful way by the high discount rate (23.31%) that Baliban used in his model. *See* JTX 151 at 18–20. I also note that, in a general sense, Dr. Ugone's credibility was undermined by the fact that at trial he merely attempted to discredit Baliban's analysis without providing an alternative calculation of his own. This Court has been critical of such an approach in the past. *Agilent Techs., Inc. v. Kirkland*, 2010 WL 610725, at *29 (Del. Ch. Feb. 18, 2010). At a minimum, the fact that Dr. Ugone failed to offer any damages model of his own and confined his opinions to criticisms of PharmAthene's damages case, limits the usefulness of his testimony. If the Court were to credit completely the testimony

In sum, I conclude that PharmAthene has carried its burden of proving with reasonable certainty that, at the time of SIGA's breach, it had a reasonable expectation that its first sale to the SNS would be of 14.778 million courses. Based on the evidence presented, however, I would allocate delivery over five years, instead of four years, as Baliban did. I next address Baliban's estimate regarding sales to the U.S. Department of Defense.

2. Sales to the DoD

Relative to the PHTN model, Baliban estimated that the DoD would purchase approximately 19,000 more courses of ST-246 over the first four years, for a total of approximately 250,000 courses of treatment over that period. The difference between the PHTN and Baliban estimates is due entirely to different estimates of the size of the U.S. military population. Baliban based his estimate on U.S. Census Bureau data as of September 30, 2006.[79]

Unlike the estimates for SNS purchases, the estimates for DoD purchases assumed a ten percent, rather than five percent, contraindication rate. In his expert report, Baliban acknowledged that he had no explanation as to why the PHTN model utilized different

---

of Dr. Ugone, it would never be possible to award expectation damages in a case such as this one, no matter how much the underlying breach of contract could be attributed to the breaching party's bad faith. I find that the use of such an approach in this case largely was unpersuasive.

[79] JTX 150 at 17–18. It is unclear what the PHTN model relied on to estimate the size of the relevant U.S. military population.

contraindication rates for the SNS and DoD purchase estimates.[80] Absent evidence, or even a proffered explanation, PharmAthene has not carried its burden of demonstrating the appropriateness of using differing contraindication rates in this context. Therefore, I conclude that Baliban should have applied the five percent contraindication rate utilized in the SNS purchase estimates to the DoD purchase estimates as well.

In all other respects, however, PharmAthene has demonstrated sufficiently that, at the time of the breach, it had a reasonable expectancy of selling ST-246 to the DoD. The record shows that during the course of their negotiations regarding the LATS and related documents and, later, the license and LLC agreements, both SIGA and PharmAthene projected that the DoD would purchase ST-246, even if their respective projections of such sales differed significantly. As discussed *supra*, the evidence presented at trial convinces me that a fair estimate of future ST-246 sales at the time of SIGA's breach could be calculated by multiplying the size of a relevant population by a reasonable contraindication percentage. Here, Baliban has devised a reasonable estimate of the size of the U.S. military population at the time of SIGA's breach based on U.S. Census Bureau data, and I have concluded that it was reasonable to assume a five percent contraindication rate at that time. Moreover, there is no evidence that, at the time of the breach, ST-246 did not meet the criteria for DoD procurement. Therefore, I conclude that PharmAthene has proven with the requisite certainty that it had a reasonable

---

80 *Id.*

expectation of selling approximately half of the quantities of ST-246 to the DoD that Baliban projected in his model.[81]

3. Sales to the ROW

The final element of Baliban's quantity estimate for the first four years of sales and later periods consisted of sales to governments outside of the United States ("ROW sales"). While the PHTN model assumed that ROW sales would equal fifty percent of SNS sales, Baliban assumed that such sales to the rest of the world would be equal to SNS sales. In determining to make that assumption, Baliban analyzed the population of other developed countries, such as the G-8 and the World Bank High Income OECD Member Countries, and assumed a contraindication rate of two-and-a-half percent, or half of the contraindication rate assumed for the U.S. population.[82] Based on that analysis, Baliban found that if he assumed ROW sales of 14.778 million (*i.e.*, equal to U.S. SNS sales), that number fell well within the range of potential sales implied by multiplying two-and-a-half percent by the populations of various groups of developed economies that he examined.[83]

Although I find that Baliban's approach of using contraindication percentages of relevant populations to estimate foreign demand was reasonable, his estimate suffers

---

81 In his "Basis 1" model based on the terms of the LATS, Baliban assumed initial DOD sales of 250,490. Based on my review of the evidence, that figure should have been 125,245, or half of what Baliban assumed.

82 JTX 150 at 18–20.

83 *Id.*

from the inherent flaw that PharmAthene has failed to make an adequate showing that, at the time of the breach, it had a reasonable expectation of enjoying foreign sales of ST-246 within the relevant damages window. Stated differently, had PharmAthene proven it had a reasonable expectancy of foreign ST-246 sales, Baliban's approach would have been proper, but PharmAthene did not carry its burden of showing that it would have been reasonable to assume in December 2006 that there would have been material numbers of ROW sales of ST-246 during the relevant damages period. The record is replete with evidence that the U.S. government had undertaken and executed a definitive plan to bolster its preparedness to respond to bioterrorism, including the establishment and initial stocking of the SNS and the creation of BARDA. It is unclear, however, to what extent, if any, other countries had followed suit in that regard. Moreover, based on the evidence presented at trial, it is at best unclear what criteria other countries would use when procuring pharmaceuticals for their own national stockpiles, even assuming they have something analogous to the SNS. I also recognize that both SIGA and PharmAthene assumed foreign sales in their respective internal valuations. Nevertheless, the bases for those assumptions were not explained adequately through record evidence.[84]

---

[84] An additional source of uncertainty is the timing of any sales to foreign governments. Other than the fact that PharmAthene and SIGA apparently both assumed for negotiating purposes that non-U.S. sales would begin in 2008, the record is devoid of evidence that corroborates the reasonableness of those assumptions. The fact that there is insufficient record evidence to permit the Court to make a responsible estimate as to when non-U.S. sales of ST-246 would occur, assuming such sales actually came to fruition, further supports my conclusion that it is inappropriate to award lost profits on foreign sales because those sales were too speculative as of December 2006.

Therefore, I conclude that PharmAthene has not shown by a preponderance of the evidence that at the time of SIGA's breach, it had a reasonable expectation of commercializing ST-246 to foreign governments within the ten year damages window. Thus, I reject the ROW sales component of Baliban's ST-246 sales quantity estimate in its entirety and will not award PharmAthene any lost profits for foreign sales of ST-246.

4. Sales quantity summary

In sum, I have determined that PharmAthene has proven sufficiently the quantity of ST-246 sales it reasonably expected to enjoy as its initial sale at the time of SIGA's breach. That quantity is 14,903,245 courses, which consists of 14,778,000 in sales to the U.S. SNS and 125,245 courses in sales to the DoD.

Baliban assumed that ST-246 had a shelf life of three to five years and further assumed that, as a result, replacement purchases to replace courses that expired would occur every four years in his initial models. In his supplemental report, Baliban used a five-year repurchase period based on information that SIGA later provided to BARDA in its bid for a contract to provide the SNS with ST-246.[85] Dr. Ugone criticized this replacement purchase aspect of Baliban's analysis for several reasons. First, according to Dr. Ugone, at the time of the breach, there were too many uncertainties as to the U.S. government's future plans for bioterrorism countermeasure purchases. These uncertainties ranged from a possible shift towards purchasing pharmaceuticals that were effective against a range of bioterrorism threats rather than specific ones to budget cuts

---

[85] JTX 159 at 3–4.

and changes in political priorities more generally. Second, Dr. Ugone restated his position that the farther in time away from the breach one gets, the more likely a viable competitive product would emerge that would, at a minimum, reduce the level of future ST-246 sales. I find these criticisms to be persuasive in the context of an estimate as of 2006 regarding sales that would not occur until 2015.

The record supports a reasonable inference that, at the time of the breach, ST-246 was an appreciably superior product relative to its potential competitors, and I find this evidence further supports the conclusion that, at the time of the breach, PharmAthene had a reasonable expectation of selling ST-246 to the U.S. government within the next four years. The record does not contain sufficient evidence, however, to establish that at the time of the breach PharmAthene had a reasonable expectation that the U.S. government would continue to purchase large quantities of ST-246 nine or more years later. There simply was not enough known at the time of the breach regarding future competition or future U.S. government policy to support a responsible estimate as of that time of what, if any, ST-246 renewal purchases the U.S. government would make. Moreover, PharmAthene has not produced evidence regarding what, if any, propensity the U.S. government historically has had in terms of repurchasing products for the SNS or that would support a reasonable inference that the U.S. government was likely to view ST-246 specifically as a product that it would repurchase within Baliban's damages window. Therefore, I reject the repurchase aspect of Baliban's model and conclude that PharmAthene's reasonable expectations at the time of the breach was a single sale of

14,903,245 ST-246 courses to the U.S. government in 2010, which would be delivered in equal installments over a five-year period.

E. Attorneys' and Expert Witness Fees

1. Relevant background

I turn next to the issue of attorneys' fees and expert witness fees. In the Post-Trial Opinion, I awarded PharmAthene one-third of its reasonable attorneys' fees based on contractual grounds, the bad faith exception to the "American Rule" on awarding attorneys' fees, and equitable considerations pursuant to 10 *Del. C.* § 5106.[86] In my discretion, I also awarded PharmAthene one-third of the expert fees it incurred.[87]

On appeal, the Supreme Court affirmed the propriety of awarding PharmAthene its reasonable attorneys' fees and expenses based on one of the contracts at issue in this dispute.[88] Nevertheless, because the Court also determined that I had to redetermine my damages award in light of its opinion and invited me to reevaluate the helpfulness of expert testimony to do so, it reversed my award of attorneys' fees and expenses so that I could reconsider that award based on my conclusions on remand.[89] Having determined that PharmAthene is entitled to expectation damages for SIGA's bad faith breach of

---

86 *Post-Trial Op.*, 2011 WL 4390726, at *43–44 (Del. Ch. Sept. 22, 2011).

87 *Id.* at *45.

88 *Supr. Ct. Op.*, 67 A.3d 330, 352 (Del. 2013). Consequently, the Court did not reach the issue of whether the bad faith exception to the American Rule was applicable. The Court ruled, however, that my invocation of 10 *Del. C.* § 5106 was improper. *Id.*

89 *Id.* at 353.

contract, as well as the proper measure of those damages, I now must consider the appropriate award of attorneys' fees and expert witness expenses that PharmAthene is entitled to for its expenditures at the trial and during the remand proceedings.

2. Attorneys' fees

In the Post-Trial Opinion, I concluded that PharmAthene was entitled to an award of one-third of the reasonable attorneys' fees it incurred in this action. Both parties have sought a revision of that award based on the Supreme Court's decision, and I am persuaded that a modest increase of my prior award is appropriate. Although the Supreme Court reversed my finding as to promissory estoppel, the proof and arguments for that claim were sufficiently interrelated with and subsumed within the proofs and arguments presented on PharmAthene's claim for breach of an obligation to negotiate in good faith that I do not consider PharmAthene's ultimate failure to prevail on its promissory estoppel claim to warrant any appreciable reduction in my award of reasonable attorneys' fees. Similarly, although the Supreme Court placed more emphasis on the terms of the LATS than I did in the Post-Trial Opinion, the Court did not hold that the LATS was, itself, a binding and enforceable agreement. Therefore, it remains true that PharmAthene did not prevail on any of the first four counts in its Complaint. In contrast, PharmAthene devoted significantly more time at trial and in its post-trial briefing to arguing that it was entitled to an award of expectation damages than it did to arguing it was entitled to an award of an equitable payment stream. Because on remand PharmAthene has prevailed, in part, on the expectation damages issue, I conclude that it is appropriate to adjust my prior award of attorneys' fees to account for PharmAthene's

efforts toward that end. Therefore, I will increase the award to PharmAthene from one-third to 40% of the reasonable attorneys' fees and expenses it incurred through post-trial argument in this litigation.

The next relevant inquiry is what, if any, award of attorneys' fees is PharmAthene entitled to for the fees and expenses it has incurred in connection with these remand proceedings. As PharmAthene notes in its briefing, the remand proceedings relate exclusively to the issue of the appropriate measure of damages for SIGA's bad faith breach of its contractual obligations to negotiate in good faith. Although the question of damages necessarily flows from the claims PharmAthene prevailed on at trial, that does not necessarily entitle PharmAthene to an award of all of the reasonable attorneys' fees and expenses it incurred in connection with these remand proceedings. This is particularly true in light of the fact that PharmAthene expended a great amount of time and resources supplementing the record with additional documentary and expert evidence that was largely unhelpful in determining an appropriate damages award. Moreover, PharmAthene devoted significant time to arguing for remedies, such as specific performance or a new equitable payment stream, as to which it ultimately did not prevail. Therefore, in my discretion, I conclude that PharmAthene is entitled to one-third of the reasonable attorneys' fees and expenses it incurred in these remand proceedings.

3. Expert witness fees[90]

As instructed by the Supreme Court, I also have reevaluated the helpfulness of the expert testimony that PharmAthene presented at trial. Having done so, and based on the guidance provided in the Supreme Court's Opinion, I conclude that the expert reports and testimony PharmAthene presented from its experts Baliban and Dr. Peck were both credible and helpful in determining the parameters of my award of lost profits to PharmAthene. Admittedly, some of PharmAthene's expert testimony and evidence strayed into areas that ultimately were not particularly relevant to the issue of proving its lump sum expectation damages, such as, for example, Dr. Peck's testimony regarding FDA approval of ST-246 and Baliban's models that were not based on the LATS. Generally, however, Baliban and Dr. Peck provided important evidence addressing the question of PharmAthene's damages, even if I ultimately did not rely on some of their specific opinions. Taking all of these factors into consideration, I award PharmAthene, in my discretion, 60 percent of the expenses PharmAthene incurred for Baliban and Dr. Peck in the pretrial and trial phases of this action.[91]

---

[90] To the extent SIGA's pre-trial motion *in limine* regarding Baliban, Dr. Peck, and Edwards remains outstanding, I deny that motion insofar as it relates to any information or evidence from those experts that I have relied on in reaching my conclusions in this Memorandum Opinion.

[91] As to PharmAthene's licensing expert, Marc Edwards, I award PharmAthene 40% of expenses incurred in connection with his pretrial and trial activity. Unlike Baliban and Dr. Peck, only a relatively small amount of Edwards's evidence appeared more relevant based on my reconsideration on remand of the helpfulness of PharmAthene's experts.

Regarding the expert fees that PharmAthene incurred in connection with the remand proceedings, I found the large majority of the expert evidence presented by both sides during the remand stage to be largely irrelevant to the issue of PharmAthene's expectation damages at the time of SIGA's bad faith breach. Accordingly, the costs taxed to SIGA also shall include only one-tenth of the expert witness fees incurred by PharmAthene during the remand proceedings.

III. CONCLUSION

For the reasons stated in this Memorandum Opinion, I reach the following conclusions.

After reconsidering the expert testimony presented at trial, I have determined that PharmAthene has carried its burden of demonstrating its entitlement to lump sum expectation damages for its lost profits related to ST-246 by a preponderance of the evidence. As detailed in this Memorandum Opinion and in the Order being entered concurrently with it, calculating PharmAthene's lost profits at the time of SIGA's bad faith breach of contract requires making several modifications to the NERA valuation model presented by Baliban. First, the timing of the period of projected revenue and income must be altered such that the first sales of ST-246 occur in 2010, rather than 2008. Second, the quantity of ST-246 sold must be reduced to account for Baliban's overestimation in varying degrees of sales to the U.S. government, DoD, and the ROW. PharmAthene is entitled to the value of NERA's revised calculations, plus pre and post-judgment interest at the legal rate, compounded quarterly. Pre-judgment interest on the

lump sum expectation damages award shall begin to accrue from December 20, 2006.[92] Third, PharmAthene's projected recognition of certain milestone payment obligations under the LATS must be amended to reflect the new timing of ST-246 sales. Finally, new COGS figures shall be calculated to reflect the decrease in projected ST-246 sales.[93]

I also deny and will dismiss with prejudice PharmAthene's claims that it is entitled to specific performance of a license agreement that comports with the LATS or an equitable payment stream whose terms are in accordance with the LATS on the grounds that it is limited to a contractual remedy and has an adequate remedy at law in the circumstances of this case.

The parties shall cooperate in implementing the procedure set forth in the accompanying Order to prepare and submit promptly an appropriate form of final judgment and order.

---

92 The legal rate shall vary in accordance with changes to the Federal Reserve discount rate from December 20, 2006 to the present.

93 In addition, the model will run from 2006 to 2014, the year of PharmAthene's last projected sales. For the same reasons I declined to award PharmAthene profits based on ST-246 sales after that year, I similarly decline to make any projections about PharmAthene's business or costs.