EXHIBIT E

IN THE UNITED STATES DISTRICT COURT
FOR THE SOUTHERN DISTRICT OF FLORIDA

APOTEX, INC. and APOTEX CORP., Plaintiffs, v. MYLAN PHARMACEUTICALS INC., Defendant.	CASE NO. 12-60704-CIV-SEITZ/SIMONTON
APOTEX, INC. and APOTEX CORP., Plaintiffs, v. PFIZER INC., and GREENSTONE LLC, Defendants.	CASE NO. 12-60705-CIV-SEITZ/SIMONTON
APOTEX, INC. and APOTEX CORP., Plaintiffs, v. LUPIN PHARMACEUTICALS, INC. and LUPIN LTD., Defendants.	CASE NO. 12-60708-CIV-SEITZ/SIMONTON

REBUTTAL EXPERT DECLARATION OF DR. MICHAEL ZAWOROTKO

I. INTRODUCTION

At the request of Defendants Lupin Ltd. and Lupin Pharmaceuticals, Inc. and Mylan Pharmaceuticals, Inc. (collectively "Defendants"), I, Dr. Michael Zaworotko, declare and state that:

1. I am submitting this Rebuttal Expert Declaration on behalf of Defendants and in support of their Responsive Claim Construction Brief in the above-captioned action.

II. MATERIALS CONSIDERED

2. In addition to the materials I considered in connection with my original Declaration in support of Defendants' Opening Claim Construction Brief, I have also reviewed Apotex's Opening Claim Construction Brief and Exhibit C to that Brief, the Expert Declaration of Dr. Christian R. Moreton in Support of Plaintiffs' Opening Claim Construction Brief ('Moreton Decl."), and the additional materials cited in this Rebuttal Declaration.

III. LEVEL OF ORDINARY SKILL IN THE ART

3. I disagree with Dr. Moreton's definition of a person of ordinary skill in the art in terms of the level of skill and the type of experience required. Moreton Decl. at ¶ 8. Dr. Moreton's definition appears to exclude analytical and synthetic chemists, which in my opinion should be included because the '486 patent is directed to processes involving a *reaction* between quinapril or an acid addition salt thereof and an alkaline magnesium compound to make a purportedly novel compound, "quinapril magnesium," and not merely a novel formulation containing "quinapril magnesium." Moreover, the '486 patent provides very little detail as to how to perform the aforementioned processes to achieve the compositions recited therein or how to detect or quantify "quinapril magnesium" in a composition. Thus, in my opinion a person of ordinary skill in the art would be someone who has skill and experience in chemical synthesis and/or analysis. In addition, I disagree that a person of ordinary skill in the art would only have a bachelor's degree and five years experience in drug formulation. In my opinion, given the dearth of information in the '486 patent concerning the reaction conditions needed to produce "quinapril magnesium" or the method to be used to detect and quantify "quinapril magnesium," the '486 patent is aimed at an individual with a higher level of skill than that identified by Dr.

Moreton, such as a Masters Degree or a Ph.D. with a number of years experience. Moreover, I also disagree with Dr. Moreton's definition to the extent that it excludes the possibility that a person of ordinary skill would have access to other individuals with specialized skills, such as an analytical chemist, pharmacist etc. In my opinion, Dr. Moreton's approach disregards the reality of pharmaceutical product development.

IV. DR. MORETON'S DECLARATION DOES NOT RESOLVE THE AMBIGUITY OF THE CLAIM TERM "QUINAPRIL MAGNESIUM"

4. I disagree with Dr. Moreton's opinion that "quinapril magnesium" is "readily identified" by the chemical formula, "$Mg(C_{25}H_{29}N_2O_5)_2$." Moreton Decl. at ¶11. On the contrary, as stated in my original declaration, a person of ordinary skill in the art would recognize that the chemical formula "$Mg(C_{25}H_{29}N_2O_5)_2$," is scientifically unsound because, *inter alia*, it does not provide for the six bonds that magnesium is known to require. Zaworotko Decln. at ¶ 35.

5. Nevertheless, even if one were to ignore the inaccuracies of the chemical formula provided for "quinapril magnesium" in the '486 patent, a person of ordinary skill in the art faced with the aforementioned chemical formula would not have been any wiser as to the meaning of the term "quinapril magnesium." As stated in my original Declaration, the chemical formula "$Mg(C_{25}H_{29}N_2O_5)_2$" provides a person of ordinary skill in the art with little guidance as to the structure of the compound because of the many associations possible between quinapril and magnesium. Zaworotko Decln. at ¶¶ 36-38. Moreover, although the '486 patent provides a chemical formula for "quinapril magnesium," there is no evidence whatsoever in the '486 patent that a compound having such a formula was ever produced as a result of any of the processes disclosed therein. Further, given the variety of processes disclosed for making "quinapril magnesium," in the '486 patent (involving the addition of a number of excipients and solvents), a

person of ordinary skill in the art would have understood that it was unlikely that "quinapril magnesium," whatever it is, has the aforementioned chemical formula. As such, Dr. Moreton's reliance on the chemical formula disclosed in the '486 patent as an identifier for "quinapril magnesium" does not resolve the ambiguity of the claim term.

6. Dr. Moreton's characterization of "quinapril magnesium" as a "complex" or a "coordination compound" likewise does not clarify the meaning of the claim term. Moreton Decl. at ¶ 11. Although the reaction of quinapril and magnesium may result in coordination bonds between quinapril and magnesium to form a coordination complex, there are other possible outcomes, for example, a salt of a solvated magnesium cation and a quinapril anion. Further, no such complex is disclosed in the art or even mentioned in the '486 patent. Accordingly, Dr. Moreton's assertion that "quinapril magnesium" is a complex is unsupported. In any case, even if one were to accept that "quinapril magnesium" is a complex, such knowledge does not provide any more information about what the structure of such a complex would be.

7. Furthermore, I am particularly troubled by Dr. Moreton's opinions that "quinapril magnesium *can* have the following chemical structure" and that "quinapril magnesium" is "a" magnesium salt of quinapril. Moreton Decl. at ¶¶ 11-12. Such assertions suggest that Apotex's proposed construction of the term "quinapril magnesium,"—magnesium salt of quinapril—allows for "quinapril magnesium" to encompass more than one compound. However, Dr. Moreton does not explain how a person of ordinary skill in the art faced with the disclosure of the '486 patent would determine whether any one compound qualifies as "quinapril magnesium." Dr. Moreton also appears to leave open the possibility that "quinapril magnesium" is a complex containing two quinapril anions and a magnesium cation associated with additional atoms or

molecules, none of which is disclosed or contemplated by the '486 patent. Apotex's proposed construction is contrary to the language of the patent specification which asserts that "quinapril magnesium" is "*the* magnesium salt of quinapril." Accordingly, in my opinion, a person of ordinary skill in the art reading the '486 patent specification would understand "quinapril magnesium" to refer to a compound having a single, yet undefined, chemical structure.

8. Finally, Dr. Moreton's proposed "possible" structure for "quinapril magnesium" is unsupported, inaccurate, and should be entirely discounted. As stated in my opening declaration, magnesium requires at least six bonds; however, Dr. Moreton's structure only provides four bonds for magnesium. As such, a person of ordinary skill in the art would have recognized that Dr. Moreton's proposed structure is scientifically unsound. In fact, even an undergraduate chemistry student would have recognized the error in Dr. Moreton's proposed structure given that undergraduate textbooks teach that the coordination number of magnesium is six. *See e.g.*, F.A. Cotton, G. Wilkinson and P.L. Gaus, *Basic Inorganic Chemistry*, Ch. 11, p. 314 (3d. ed., 1995). Unsurprisingly, Dr. Moreton cites no authority whatsoever for his proposed structure and provides no explanation for its configuration. Dr. Moreton also appears uncertain as to whether quinapril and magnesium are associated by way of an ionic bond, which would afford a salt, or a covalent bond, which would afford a coordination complex. I further note that Dr. Moreton provides no indication whatsoever as to what a person of ordinary skill in the art would understand the other possible structures for "quinapril magnesium" to be.

9. In sum, Dr. Moreton's assertion that "quinapril magnesium" is readily identifiable by the chemical formula provided in the '486 patent together with his description of "quinapril magnesium" as a complex, and his provision of a possible structure of "quinapril magnesium," merely exemplifies the ambiguity of the claim term "quinapril magnesium" and does not alter

my opinion that a person of ordinary skill in the art faced with the '486 patent, would not have understood the meaning of the term "quinapril magnesium."

Dated: January 14, 2013

Michael Zaworotko, Ph.D.