EXHIBIT 50

Contains Highly Confidential Information Pursuant to Protective Order

UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS

AMGEN INC., Plaintiff, v. F. HOFFMANN-LA ROCHE LTD, ROCHE DIAGNOSTICS GmbH, and HOFFMANN-LA ROCHE INC., Defendants	Civil Action No. 05 CV-12237 WGY

EXPERT REPORT OF DAVID J. TEECE, Ph.D.

May 11, 2007

Elhauge fashions an alternative test consistent with his distinctive view that any loss in discount rate occasioned by switching suppliers constitutes "foreclosure." My review of his test finds that it provides no insight regarding whether Roche would be anticompetitively "foreclosed" by Amgen's multiproduct discounts. But even if it were relevant to identifying anticompetitive "foreclosure," Professor Elhauge's flawed implementation of his own test leads him to incorrect conclusions.

234. Specifically, Professor Elhauge begins his customized analysis by estimating that Amgen's share of non-ESRD ESA sales to hospitals would have to decline from the current 51.1 percent level to 34.1 percent to allow Roche to obtain a 33 percent share of non-ESRD hospital sales, assuming its share comes from diverted Amgen and Ortho sales in proportion to their current shares.[330] Because this results in the post-entry Amgen share *over all hospitals in aggregate* falling below 40 percent, Professor Elhauge concludes that *all* hospitals would lose *all* performance-related Aranesp® discounts/rebates and Neupogen®/Neulasta® rebates if customers switched to Roche.[331]

235. He subsequently calculates the portion of current Aranesp® sales hospitals would have to maintain to avoid any reduction in their Amgen rebate tier, this time on a hospital-by-hospital basis. He concludes from this second version of his test that Amgen's multiproduct discounts would foreclose Roche from hospital sales representing 23 percent (22.75 percent) of the total non-ESRD market (excluding oncology clinics).[332]

236. I am unaware of any economic literature that supports the validity of the test Professor Elhauge employs. It simply reflects his unique belief that *any* reduction in the discount rate due to purchasing from another supplier is anticompetitive, which, as discussed above, conflicts with current economic scholarship that only questions such discounting structures if a single product firm could not *profitably* compete against the bundled discount structure. Professor Elhauge's test inappropriately addresses whether *Roche* is disadvantaged by Amgen's multiproduct pricing in hospitals, rather than whether Roche is prevented from profitably competing with it. Thus, his test is irrelevant to the issue of whether Amgen's multiproduct discounting is anticompetitive. However, even if

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330 Elhauge Report at ¶¶130-131 and fn 264. Of Roche's assumed 33 percent hospital share, Professor Elhauge calculates that 17 percentage points (51.1 percent Amgen Pre-Entry Share * 33 percent Roche Post-Entry Share) would be diverted from Amgen, leaving Amgen with a 34.1 percent post-entry share (51.1 percent Pre-Entry Share – 17 percent Share Diverted to Roche).

331 Elhauge Report at ¶131.

332 Elhauge Report at ¶¶158-159. The base for this 23 percent estimate is the non-ESRD market defined by Professor Elhauge, less oncology clinic ESA sales. It is equivalent to 37 percent of non-ESRD ESA sales specifically to hospitals, (*See* Section XVIII, below.)

Professor Elhauge's test were appropriate, his specific analysis suffers from numerous flaws that invalidate his conclusions.

1. PROFESSOR ELHAUGE'S AGGREGATE HOSPITAL ANALYSIS IS MEANINGLESS

237. As an initial matter, the aggregate version of the test that Professor Elhauge performs as though the entire non-ESRD hospital market segment were one giant hospital is meaningless.[333] Differences in hospital purchasing patterns cause hospital-specific deviation in qualification for different Amgen discount/rebate tiers, such that, if performed on a hospital-by-hospital basis, Professor Elhauge's test would yield substantially different results.[334] In fact, if as Professor Elhauge assumes, hospitals switched in aggregate 33 percent of their ESA purchases to Roche, they would need to sacrifice only between $4 million and $7 million in Neupogen®/Neulasta® and Aranesp® rebates each quarter as a result of falling into lower rebate tiers.[335] Exhibit 7A show that these lost rebates sum to $18 million over the last three quarters of 2006, far lower than the $329 million Professor Elhauge reported would be lost over this same period based on his meaningless single aggregate hospital methodology.[336] But as I have

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333 This error is akin to what is known in the economic literature as the "fallacy of composition," which is a "fallacy in which what is true of a part is, on that account alone, alleged to be also true on the whole." (Paul A. Samuelson, *Economics: An Introductory Analysis*, N.Y.: McGraw Hill, (1955), cited in Ricardo J. Caballero, *Fallacy of Composition*, 82 AMERICAN ECONOMIC REVIEW No. 5, (December 1992, p. 1279.)

334 Later in his report, Professor Elhauge employs a hospital-by-hospital analysis to estimate the percentage of his non-ESRD market allegedly "foreclosed" due to Amgen's multiproduct hospital discounts. (Elhauge Report at ¶¶157-158) But even this analysis overestimates any "foreclosure" because it fails to capture the fact that AAA hospitals qualifying for Supplement/System rebates could fall below their current rebate tier and yet suffer no loss in their rebate percentage if the hospital system of which they are a member does not fall below its current rebate tier.

335 Lost rebates would sum to $22 million for the full year period November 2005 to October 2006 on a hospital-by-hospital basis using Roche's November 2005 to October 2006 DDD data ("2 - DDD acct level + owners - Nov 04 to Oct 06 for Kaye Scholer.xls" R005178638).

336 Elhauge Report at ¶¶130-131. Notably, Professor Elhauge counts in his $329 million lost rebate estimate those discounts and rebates that his aggregate hospital would have paid on the 17 percent Aranesp® share he assumes would shift to Roche, even though these Aranesp discounts/rebates do not constitute hospital switching costs over and above normal single product price discounting with no loyalty requirements. Moreover, only 22 percent ($57.2 million + $13.9 million) of the $329 million in allegedly lost Amgen discounts/rebates were represented by lost rebates specifically on Neupogen® and Neulasta®. And of the 78 percent comprising lost

(Footnote continued)

indicated, the simple fact that customers would lose a relatively small amount of rebate on sales they continue to purchase from Amgen is insufficient to conclude that the discount structure is anticompetitive.

2. *PROFESSOR ELHAUGE'S 33 PERCENT ROCHE SHARE ASSUMPTION IS UNREALISTIC*

238. But even this rebate loss is overestimated because Professor Elhauge's assumption that in the absence of the Amgen multiproduct discounts Roche would immediately achieve a 33 percent share of non-ESRD hospital sales, equal to each of the two incumbent competitors, is simply not realistic. Even Roche documents anticipate that it will take years for peg-EPO to reach its peak market share.[337]

239. In addition, peg-EPO would suffer a number of disadvantages that would significantly restrict Roche's peak penetration of hospital ESA sales to much less than 33 percent regardless of Amgen's multiproduct discounts. These include, among other reasons:

First, peg-EPO lacks FDA approval for any cancer-related indications, which is expected to impede significantly its penetration of the hospital segment.[338] This impediment will likely be exacerbated by the recent FDA warning related to cancer indications that likely will instill greater reluctance to use peg-EPO off-label for cancer indications.

Second, Roche anticipates that peg-EPO's long-lasting effect would be a disadvantage in competition for hospital inpatient sales because peg-EPO would require hospitals to dose medications (at added expense) that would last until long after their discharge from the hospitals.[339]

(Footnote continuation)

Aranesp discounts/rebates, 47 percentage points ($153.81 million) were lost Aranesp® invoice discounts that were dependent only upon the Aranesp® 40 percent purchase threshold. (*See* Elhauge Report at fn. 264.) In fact, over the second quarter 2006 to fourth quarter 2006 period Professor Elhauge analyzed, Amgen provided the full Aranesp® 25 percent invoice discount without any purchase requirement at all. ("Hospital Contract Program Training," AM44 1159810)

337 Hinson Ex. 8, R001455683, "2005 Business Plan – OPAC Statement." and Hinson Ex. 9, R005189694, "2006 Business Plan – OPAC Statement."

338 *See, e.g.*, "Questions Raised by Global," R004880482, "CERA 2006 Renal FMR Management Review," R003852427, 2431 and 2433. *See also*, Graf Tr. 68 to 69, Beimfohr Tr. 65 to 66 and Kokino Tr. 178 to 179.

339 *See, e.g.*, "Mircera Preliminary Pricing and Contracting Recommendations, US Pricing

(Footnote continued)