IN THE UNITED STATES DISTRICT COURT
FOR THE 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

ROCHE'S OPPOSITION TO AMGEN'S BENCH MEMORANDUM REGARDING EVIDENCE OF INFRINGEMENT OF CLAIM 7 OF THE '349 PATENT (D.I. 1339)

Roche submits this memorandum in opposition to the bench memorandum submitted by Amgen in an attempt to persuade the Court that it has provided evidence that would allow a reasonable jury to conclude that Roche infringes claim 7 of the '349 patent.

Claim 7 of the '349 patent depends from claims 1-6 which claim vertebrate cells that, among other things, are capable of producing specified amounts of EPO quantified in terms of "U[nits] of erythropoietin per 10^6 cells in 48 hours as determined by radioimmunoassay." Amgen's evidence that Roche satisfies this element of the claim starts and ends with the *ipse dixit* of Dr. Lodish whose analysis is as follows: (1) Roche's BLA states that, as measured by ELISA, the cells Roche uses produce 7.4 micrograms of EPO per million cells for 48 hours; (2) Roche's BLA defines the specific activity of EPO as 207,700 units per milligram; (3) using the specific activity one can convert the 7.4 micrograms of EPO to 1,500 units of EPO per million cells in 48 hours; and (4) one

would expect ELISA results (per the BLA) and RIA (per the claim) to be the same. Thus, Dr. Lodish concludes that Roche's cells exceed claim 1's production capability of "100 U of erythropoietin per 10^6 cells in 48 hours as determined by radioimmunoassay."

Even assuming that RIA is capable of measuring erythropoietin as required by '349 claim 7[1], Dr. Lodish provides no support whatsoever for the two leaps of faith that allegedly allow him to arrive at his conclusion.

Roche's BLA states that the reported specific activity was measured *in vivo* in a mouse bioassay. (Trial Ex. 52 at 5581). However, the BLA's reference to 7.4 micrograms of EPO per million cells in 48 hours was measured *in vitro* by ELISA. Thus, Dr. Lodish mixes apples and oranges. He converts micrograms of EPO as measured *in vitro* by ELISA to Units of activity as measured *in vitro* by ELISA using a standard which measured EPO activity *in vivo* in a mouse assay. Dr. Lodish offers no support or explanation for his use of this unorthodox conversion method. He does not assert that *in vitro* assays of human EPO and *in vivo* mouse assays of human EPO are interchangeable.

Having thus supposedly arrived at an EPO production level as measured by ELISA, Dr. Lodish reasons that even though the claims specifically prescribe an activity level as determined by radioimmunoassay, it is entirely valid to assume that the activity level as measured ELISA is the same as measured by the radioimmunoassay required by the claim. Again, Dr. Lodish offers no support for this second leap.

In arriving at his infringement opinion, Dr. Lodish admits that he never conducted a radioimmunoassay test as per the language of the claims of the '349 patent. Nor did he rely on radioimmunoassay data reported by Roche. Rather, he used unrelated pieces of

[1] As detailed in Roche's motion for summary judgment on '349 claim 7 (see D.I. 540) , an RIA assay cannot determine the amount of "erythropoietin" as defined by the Court, produced by vertebrate cells of claims 1-6.

data and two unfounded leaps of faith to arrive at his opinion that Roche infringes. Given the obvious gaps in Dr. Lodish's analysis, no reasonable jury could find that Amgen has met its burden of proving infringement.

In another approach, Amgen attempts to rely on the results of RIA testing contained in the expert reports of a non-testifying expert witness. At sidebar, the Court ruled the results of these tests inadmissible because Dr. Lodish did not perform these tests himself. (Tr. Trans. 2469:6 - 22) ("I think I know how 702 works, and I will follow 702, but his opinion is just -- his opinion is nothing more than repeating hearsay."). Not only did the Court preclude Dr. Lodish from testifying as to the results, but it also confirmed Roche's contention that the tests themselves were nothing more than hearsay. *Id.* No reasonable jury could find that Amgen has met its burden of proving infringement based on Dr. Lodish's conclusory statements regarding this unseen "data" that is not in evidence.

The RIA testing that Amgen seeks to rely on was performed by unidentified third parties, allegedly working under the "supervision" of Amgen's expert, Dr. McLawhon. *See* Roche's MIL to Preclude Amgen From Proffering Testimonial or Documentary Evidence Concerning Infringement Testing Under Federal Rules of Evidence 602, 901, and 702/703, Filed on Oct. 4, 2007, (D.I. 1297). Even if Dr. McLawhon had performed these tests (he did not), the testing was, as admitted by Dr. McLawhon during his deposition, so fundamentally flawed that Amgen did not even identify Dr. McLawhon as a trial witness, to attempt to introduce those tests into evidence.

Amgen's doctrine of equivalents argument is equally flawed. Infringement under Section 271(g) requires a showing of literal infringement. *Genentech, Inc. v. Boehringer*

Mannheim GmbH, 47 F. Supp. 2d 91, 107 (D. Mass. 1999)("once the patentee proves that the process falls within the literal scope of the patent, the court must determine whether the 'materially changed' provision of Section 271(g) applies"). Furthermore, Dr. Lodish did not address the doctrine of equivalents during his testimony. In any event, even if one were to accept that an ELISA and an RIA are not significantly different, Dr. Lodish's analysis is still fundamentally flawed because he had no basis for converting the BLA's *in vitro* measurement of EPO in micrograms to an *in vitro* measurement of Units of EPO using a standard which measured EPO by an *in vivo* mouse assay.

Finally, Roche's citation to this Court's decision in *Amgen, Inc. v. Hoechst Marion Roussel, Inc., 126 F. Supp. 2d 69* (D. Mass. 2001), only underscores how flimsy its infringement evidence is in this case. In the prior litigation, Amgen relied on an RIA test conducted by Dr. McLawhon to prove infringement of claim 1. Although Amgen used ELISA test data to prove infringement of claim 3, the Court relied on "Amgen's evidence regarding the comparability of ELISA and RIA measurements." *Id*. at 120. Here, that evidence is nothing more than Dr. Lodish's say so. In any event, there is no indication that in the previous case the ELISA numbers converted to RIA numbers were arrived at via a conversion that mixed *in vivo* and *in vitro* activity measurements as Dr. Lodish does here.

In sum, Amgen's "evidence" that Roche infringes claim 7 of the '349 patent falls far short of the showing required even to survive a motion for judgment as a matter of law.

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