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. 05-12237 WGY

SUPPLEMENTAL DIRECTED VERDICT OPPOSITION REGARDING § 102(f) DERIVATION AND OBVIOUSNESS OF CLAIM 7 OF THE '349 PATENT RESPONDING TO ARGUMENTS RAISED BY AMGEN DURING SEPTEMBER 24 HEARING

During the September 24 oral argument of Amgen's directed verdict motion on invalidity, counsel for Amgen blithely dismissed what he termed Roche's "derivation under 102(f)" argument, terming it "low lying fruit" to which Goldwasser's testimony supposedly "put an end." Amgen either misunderstands or mischaracterizes Roche's § 102(f)/§ 103 theory. Roche submits this memorandum to clarify its Section 102(f) defense -- a defense of *obviousness relying* upon derivation.

35 U.S.C. § 102(f) states:

> A person shall be entitled to a patent unless he did not himself invent the subject matter sought to be patented.

Under this subsection, a person cannot patent an invention derived from another's invention. Derivation under § 102(f) requires demonstration of both "(1) prior conception of the invention by another and (2) communication of that conception to the patentee that is 'sufficient

to enable [him] to construct and successfully operate the invention.'" *Int'l Rectifier Corp. v. IXYS Corp.*, 361 F.3d 1363, 1376 (Fed. Cir. 2004); *see also Pannu v. Iolab Corp.*, 155 F.3d 1344, 1351 (Fed. Cir. 1998) (finding error in granting JMOL on inventorship where there was sufficient § 102(f) evidence to establish co-inventorship: alleged co-inventor "conceived significant aspects of the invention").

Dr. Goldwasser's purified human EPO (conception), including his tryptic fragments given to Amgen (communication), constitute subject matter derived from another pursuant to Section 102(f) which, in combination with other prior art, render the asserted claims obvious. The Federal Circuit has held that "subject matter derived from another not only is itself unpatentable to the party who derived it under § 102(f), but, when combined with other prior art, may make a resulting obvious invention unpatentable ... under a combination of §§ 102(f) and 103." *OddzOn Prods., Inc. v. Just Toys, Inc.*, 122 F.3d 1396, 1403-04 (Fed. Cir. 1997); *see Robinson Labs, Inc. v. Walls Indus., Inc.*, 2003 U.S. Dist. LEXIS 17712, *18 (D. Minn. Sept. 30, 2003) (finding obviousness in light of combination of § 102(f) derivation and prior art); *see also Gambro Lundia AB v. Baxter Healthcare Corp*., 110 F.3d 1573, 1576 (Fed. Cir. 1997) (another person need only invent *part* of the invention to qualify under § 102(f)). Prior art, under § 102(f), "does not pertain only to public knowledge, but also applies to private communications between the inventor and another which may never become public." *OddzOn*, 122 F.3d at 1401-2.

Roche does *not* argue that Goldwasser's purified human EPO, including his tryptic fragments, or his IND or grant applications (discussed below) constitute prior art that invalidate all of the asserted claims by § 102(f) derivation *alone.* Rather, Roche contends that purified

EPO, the IND, and/or the grant applications *in concert* with *other prior art* available at the time of the invention would have made Lin's invention obvious to one of skill in the art.

Any argument by Amgen that § 103(c) precludes a § 102(f) combination under the exemption for joint inventors tied by a "joint research agreement" (defined in the statute as a "written contract, grant, or cooperative agreement") (§ 103(c)(2)) is without merit or factual support. As counsel for Roche pointed out at oral argument, Goldwasser "didn't have a written contract with Amgen. He gave [the EPO] to them. It's in their patent where they say they did it themselves, and the reality is that they didn't." Goldwasser's own testimony substantiates Roche's contention and Amgen has not shown otherwise. (Goldwasswer 546:22-548:21).

Accordingly, Goldwasser's purified EPO[1] and documents related to his underlying study[2] constitute § 102(f) derivation prior art which *in combination* with the relevant prior art, support a finding of obviousness for Lin's invention.

Additionally, Amgen counsel's assertion that Farber was the only obviousness reference cited against claim 7 of the '349 patent is simply untrue. In particular, with respect to the limitations of '349 claim 7 (incorporated from claims 1 through 6) to vertebrate cells capable of producing erythropoietin in the medium of their growth in excess of 100, 500 or 1000 U of erythropoietin per 10^6 cells in 48 hours as determined by radioimmunoassay, this and other evidence constitutes convincing evidence that these limitations would have been obvious. As Dr. Lowe further explained, amplification means increasing the number of copies of a gene that has been delivered into a cell. (Lowe 267:18-24; TRX 2024). In this regard, the Axel patent

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[1] For a more detailed discussion of Goldwasser's purified EPO as prior art, *see* Defendants' Opposition to Amgen's Motion for Judgment as a Matter of Law Regarding Roche's Invalidity Defenses, at 8-15.

[2] For a more detailed discussion of the Baron-Goldwasser IND and Goldwasser's NIH grants, *see* Exhibit D of Defendants' Opposition to Amgen's Motion for Judgment as a Matter of Law Regarding Roche's Invalidity Defenses as Exhibit D.

taught “a variety of means of delivering genes from many organisms...including humans...into mammalian cells” to “allow one to make lots of, high quantities of the protein that was directed by the gene that was delivered to the cells.” (Lowe 267:11-16; TRX 2024). Importantly, Dr. Lowe indicated that this technique was specifically developed as a solution if one wanted “to make lots of proteins, for example, to treat humans” and one “would want to have a cell that’s making as much as possible of the protein of interest.” (Lowe 268:2-12). As an example, the Goeddel patent (United States Patent No. 4,766,075) and counterpart published European patent application (EP 0 093 619) disclosed use of amplification with CHO cells to allow “the production of sufficient quality and quantity” of biologically active human tissue plasminogen activator (a “clot-buster” protein) “to initiate and conduct animal and clinical testing as prerequisites to market approval...” (Lowe 280:12-281:16; 281:25-282:16; 283:21-284:3; TRX 2030, TRX 2029).

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Boston, Massachusetts

Respectfully submitted,

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