

# **EXHIBIT F**

CONTAINS CONFIDENTIAL MATERIAL  
PURSUANT TO PROTECTIVE ORDER

**REDACTED**

**UNITED STATES DISTRICT COURT  
DISTRICT OF MASSACHUSETTS**

----- X	
AMGEN INC.,	:
	:
Plaintiff,	:
	:
v.	:
	:
F. HOFFMANN-LA ROCHE LTD, a Swiss	:
Company, ROCHE DIAGNOSTICS GmbH, a	:
German Company and HOFFMANN-LA ROCHE	:
INC., a New Jersey Corporation,	:
	:
Defendants.	:
	:
----- X	

Civil Action No.: 05-12237 WGY

**APRIL 6, 2007 EXPERT REPORT OF MICHAEL SOFOCLEOUS**

I, **MICHAEL SOFOCLEOUS**, submit this report pursuant to Fed. R. Civ. P.

26(a)(2)(B) on behalf of defendants, F. Hoffmann-La Roche Ltd, Roche Diagnostics GmbH and Hoffmann-La Roche Inc. (collectively “Roche”) to set forth the opinions I have formed and may offer at trial of this action.

**I. Background**

*Education and Experience*

1. I am an expert in the field of patent practice and procedure. In particular, I have thirty-eight years of experience with the practices and procedures of the United States Patent and Trademark Office (“PTO” or “Patent Office”) and related litigation. My experience includes examining, counseling and interferences.

2. I received my Bachelor of Science degree in Chemistry from Renssalaer Polytechnic Institute in 1965, which was followed by my Juris Doctorate degree in 1973 from The National Law Center at George Washington University.

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promoter DNA, operatively linked to DNA encoding the mature erythropoietin amino acid sequence of FIG. 6; and

b) isolating said glycosylated erythropoietin polypeptide expressed by said cells.

(‘698 patent, claims 1-9).

450. By prosecuting these process claims to issuance in the ‘698 patent, Applicant voluntarily filed a second application when there was no requirement to restrict the process claims from the other Group II claims. As a result, the safe harbor provisions of 35 U.S.C. §121 do not apply, and the ‘008 patent is available as a double-patenting reference against the ‘698 patent.

451. I recognize that a terminal disclaimer was filed to obviate obviousness-type double patenting challenges of the ‘698 patent over the ‘868 patent (‘381 File History, Paper 8, 12/20/96, Terminal Disclaimer; Paper 9, 12/20/96 Second Preliminary Amendment and Terminal Disclaimer at 10; *see also* Paper 7, 12/11/96 Interview Summary); however, the disclaimer does not disclaim that portion of the patent term of the ‘698 patent which exceeds the ‘008. Therefore, it does not obviate invalidity for obviousness-type double patenting in light of the ‘008 patent. By failing to properly disclaim the ‘698 patent term, Amgen extended its patent protection for nearly 8 years beyond the 2004 expiration of the ‘008 patent.

**3. The ‘349 Patent Is Not Consonant With the ‘008 Restriction Requirement**

452. The ‘349 patent issued on May 26, 1998 with dependent claim 7 which reads:

7. A process for producing erythropoietin comprising the step of culturing, under suitable nutrient conditions, vertebrate cells according to claim 1, 2, 3, 4, 5 or 6.

For example, one of the independent claims it depends from is:

1. Vertebrate cells which can be propagated in vitro and which are capable upon growth in culture of producing erythropoietin in the medium of their

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growth in excess of 100 U of erythropoietin per  $10^6$  cells in 48 hours as determined by radioimmunoassay, said cells comprising non-human DNA sequences which control transcription of DNA encoding human erythropoietin.

(‘349 patent, claims 1-7).

453. Claim 7 of the ‘349 application recites a “process for producing a polypeptide” similar to the restricted Group II claims 69-72 of the ‘298 application. Each of the restricted Group II claims recite “a process for the production of a polypeptide ... comprising ... host cells” similar to claim 7. While there was no claim in the ‘298 application to “a process for producing a polypeptide” with the specific claim limitation “capable of producing ... U of erythropoietin per  $10^6$  cells 48 hours as determined by radioimmunoassay”, claim 7 of the ‘349 is clearly a process claim as defined by Examiner Giesser’s Group II restricted claims.

454. Mr. Borun considered claims very similar to claim 7 as process claims when he added similar claims in the ‘381 application (which issued as the ‘698 patent). The ‘381 application included file claims 68 and 69 directed to “a process for the preparation of human erythropoietin” similar to claim 7 of the ‘349 patent (discussed above). Filed claim 68 of the ‘381 application reads:

68. A process for the preparation of a human erythropoietin comprising the steps of:

(a) growing, under suitable nutrient conditions, host cells which can be propagated in vitro outside the cavity of a living organism and which upon growth in culture produce in the medium of growth a human erythropoietin in excess of 100 U of erythropoietin per  $10^6$  cells 48 hours as determined by radioimmunoassay; and

(b) isolating said human erythropoietin therefrom.

Similarly, filed claim 69 of the ‘381 application reads:

69. A process for the production of a human erythropoietin comprising the steps of:

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(a) providing culture medium suitable for use in culturing cells in vitro, said culture medium not being fluid of a warm blooded animal,

(b) growing under suitable nutrient conditions host cells which can be propagated in vitro and which upon growth in culture produce in the medium of their growth human erythropoietin in excess of 100 U of erythropoietin per  $10^6$  cells in 48 hours as determined by radioimmunoassay; and

(c) isolating said human erythropoietin therefrom.

Mr. Borun represented that “new claims 61-69 are supported in the claims of the prior application (USSN 07/113,179 [the ‘868 patent]) as originally filed. (‘381 File History, Paper 4, 6/6/95 Preliminary Amendment). Claims 61-69 were eventually cancelled from the ‘381 application. (‘381 File History, Paper 9, 12/20/96 Second Preliminary Amendment).

455. In contrast to claim 7, claims 1-6 of the ‘349 patent are product claims. Claims 1-6 of the ‘349 patent originated from claim 42 of the ‘298 patent. (‘369 File History, Paper 11, 5/6/97 Interview Summary (“Exr. indicated that proposed claim 42 versions B and C would overcome 112 rejection”). Claim 42 was restricted into Group IV of the July 3, 1986 restriction requirement. (‘298 File History, Paper 8, 7/3/86 Office Action). Group IV contained no process claims.

456. In addition, Applicant made no mention in the continuation ‘381 application that he was filing the claims which issued as the ‘349 in response to the restriction requirement in the ‘298 application, let alone that he was filing each of the claims as a result of that restriction.

457. By prosecuting process claim 7 of the ‘349 patent to issuance, Applicant broke consonance with the July 1986 restriction requirement that required all process claims to be prosecuted together in restriction Group II. As a result, the safe harbor provisions of 35 U.S.C.

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§121 do not apply, and the '008 patent is available as a double-patenting reference against the '349 patent.

458. Furthermore, the '349 patent has not been terminally disclaimed over the '008 patent, thereby improperly extending patent protection approximately 10 ½ years beyond the expiration of the '008 patent.

**4. The '933 and '080 Patents Are Not Consonant With the '008 Restriction Requirement**

459. In explaining why Group I claims (drawn towards polypeptides) were distinct from Group II (drawn towards DNA, processes and host cells) in the July 1986 restriction requirement, the Patent Office reasoned that because the EPO polypeptides could be made by a process different from the recombinant DNA and host cells, such as from the isolation of natural tissue sources, the inventions were deemed different. The Patent Office stated as follows:

Inventions I and II are related as process of making and product made.

'The inventions are distinct if either (1) the process as claimed can be used to make another and materially different product, or (2) the product as claimed can be made by another and materially different process. MPEP 806.05(f)'

In this case, the product as claimed may be made by a materially different product, such as isolation from a naturally occurring source.

('298 File History, Paper 8, 7/3/86 Office Action (emphasis added)).

460. However, during the course of prosecuting the '933 and '080 applications, Applicant amended the pending claims such that the EPO polypeptide could *not* be isolated from *natural* sources and could only be expressed by using the recombinant DNA and host cells claimed in the '008 patent (*i.e.* the Group II claims).

461. Following an Office Action rejection where the pending claims were held obvious over prior art disclosing EPO protein isolated from human sources ('178 File History, Paper 13,

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claims were allowed, Applicant filed two additional continuation applications before the '933 and '080 patents finally issued. Finally, none of the interferences included counts relating to the '349 or '422 patent claims and, thus, do not account for any delay.

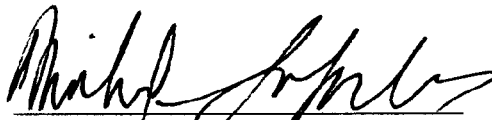
500. The initial '024 application was filed on 12/13/1983, and the last patent-in-suit issued on 9/21/1999. Fewer than three of these almost-sixteen years were attributable to the delay caused by interference proceedings. In my view, the prosecution strategy reflected in the preceding paragraphs—and not administrative delay on the part of the PTO—was responsible for the protracted prosecution of the claims-in-suit.

501. For all of the reasons stated above and in the preceding section A, even if Amgen had been required to file the Lai '016 application separately from the patents-in-suit, it cannot be said that the PTO was solely responsible for the delay in prosecution of any of the patents-in-suit. Accordingly, Amgen is not entitled to a two-way test for obviousness with respect to any of the claims-in-suit, and the Examiner's finding that the two-way test applied with respect to certain claims introduced in the '179 application was in error.

502. In conclusion, if the claims-in-suit would have been obvious to one of ordinary skill in the art in light of the claims of the Lai '016 patent, then claims-in-suit must be held invalid on the basis of obviousness-type double patenting, without regard to whether the Lai '016 claims would also have been obvious in light of the claims-in-suit.

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Dated: April 6, 2007

  
Michael Sofocleous



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**CERTIFICATE OF SERVICE**

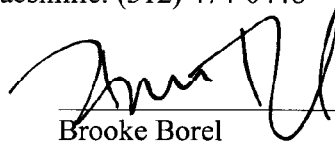
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