Exhibit 8

Claimants
S Brenner
1st
Annexes 1-4
Date

IN THE HIGH COURT OF JUSTICE
CHANCERY DIVISION
PATENTS COURT

CH1993-K-No. 937
CH1993-B-No.4552

"In the matter of European Patents (UK) Nos. 148,605 and 411,678 and in the matter of actions for infringement and counterclaims for revocation thereof by inter alia Kirin-Amgen Incorporated, Janssen-Cilag Limited and Roche Diagnostics GmbH"

HC1999 No. 02916
HC1999 No. 02917
HC1999 No. 03241

"In the matter of European Patents (UK) Nos. 148,605 and in the matter of a claim for revocation and a claim for a declaration of non-infringement thereof by inter alia Transkaryotic Therapies Inc and an action for infringement by inter alia Kirin-Amgen Inc."

EXPERT REPORT OF
DR SYDNEY BRENNER CH FRS

A. Personal background, qualifications and experience

1. I was born in South Africa and educated at the University of Witwatersand, Johannesburg (Medicine and Science). I went to Oxford in 1952 and received a degree of D. Phil., in 1954 working in the Physical Chemistry Laboratory. After a brief return to South Africa, I joined the MRC Unit in the Cavendish Laboratory in 1956. I worked in it and its successor, the MRC Laboratory of Molecular Biology in Cambridge where I was the Director from 1979 to 1987. In 1987, I became Director of the MRC Unit of Molecular Genetics retiring in 1992 from the MRC. I am now the Director of the Molecular Sciences Institute, a private research institute in Berkeley, California.

H. Cloning EPO in 1983

60. I have read what Professor Randolph Wall has said about the state of the art in cloning in 1983 and the problems in screening a genomic library where there is available only a small amount of possibly inaccurate amino acid sequence data. I confirm that this accurately sets out the position in 1983.

61. In my opinion, the prospects of succeeding in isolating the EPO gene from a genomic library, with the amount of amino acid sequence information, would have been so low as to make it a pointless waste of time. If in 1983 I had been asked by the scientific board of a biotechnology company whether a research project to isolate the EPO gene via a genomic library should be undertaken, I would have advised that such research was highly likely to result in failure. I would have advised that the work should be done on screening cDNA libraries. Had this proved unsuccessful, I would recommend concentrating on finding an enriched cDNA library. Had this still not worked, I would have suggested trying to get better sequence information to try screening the cDNA libraries again. However, I would not have advised screening a genomic library because of the far greater complexity of genomic libraries and I would also have been concerned that the gene could have been hundreds of kilobases long with large introns and the exons could have been distributed over many different phages in a genomic library.

62. For the reasons I have explained above, I consider Amgen's cloning of the EPO gene to be a very impressive piece of scientific work. I would not have viewed screening a genomic library (as opposed to a cDNA library) with fully degenerate probes to be a viable option, bearing in mind the limited amount of amino acid sequence information available and its level of degeneracy.

63. I understand that a number of other scientists also tried to clone EPO by screening a cDNA library, but they were unsuccessful. These scientists included Dr Julian Davies and colleagues at Biogen and Dr Stuart Orkin at the Children's Hospital, Massachusetts.

64. If, having tried and failed with a cDNA library, I was told that notwithstanding all the negative indications for probing a genomic library with limited amino acid sequence

information, that I should have a go at screening a genomic library, I would have assessed the prospects of success as extremely low. I can only conclude that there was also a significant degree of luck as well as scientific ingenuity which led Amgen to successfully clone the EPO gene.

65. I have read the Judgement of the US District Court in Amgen Inc. –v- Chugai Pharmaceutical Co. Ltd. (1989) and particularly the section describing the work that Dr Lin did in cloning the EPO gene. Frankly, I think he was extremely lucky and showed enormous perseverance in what was a long and must have been a very discouraging project until he succeeded. I say lucky because, as I have explained above, the gene could have been very large and could have been distributed over many phages in the genomic library and this would have made its isolation by the method used by Amgen impossible.

66. I understand that the parties have raised various allegations, such that because of the non-availability of certain specific plasmids referred to in the '605 Patent, it may be difficult for the skilled man to rework the '605 Patent. Whilst I understand that Professor Randolph Wall and Dr Michael Gait will be dealing with these issues in detail, I would just like to comment that as of 1983, once you were given all the exons for a particular gene, getting expression of the protein was frankly routine. As I have said the exons are the template, it is all the scientist would have required to make a clone capable of producing the protein. This template would also then allow the construction of unique probes to allow the scientist to obtain cDNA either as rare clones in foetal liver library or to make an actual cell line producing EPO mRNA.

67. With the knowledge that the EPO gene was present in the widely available Lawn library and with the full accurate sequence to make suitable probes, I believe it was a matter of routine to obtain one's own EPO clone via this route. I also believe it would be a matter of routine to devise a vector using a viral promoter such as SV40 which would be capable of expressing EPO from CHO, COS or other mammalian cells. I say that not just for someone of my experience, but for any postdoctoral scientist with experience of working in this area. If someone could not obtain an EPO clone and achieve expression

of EPO with the information presented in the '605 Patent, I would seriously question whether that individual was capable of doing his/her job properly.

68. I believe that the facts stated in this report are true.

DATED this 22 day of November 2000

SIGNED: .....

DR SYDNEY BRENNER CH FRS