

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE**

GENENTECH, INC. and CITY OF HOPE,)

Plaintiffs and Counterclaim Defendants,)

v.)

AMGEN INC.,)

Defendant and Counterclaim Plaintiff.)

C.A. No. 18-924-CFC

GENENTECH, INC. and CITY OF HOPE,)

Plaintiffs and Counterclaim Defendants,)

v.)

SAMSUNG BIOEPIS CO., LTD,)

Defendant and Counterclaim Plaintiff.)

C.A. No. 18-1363-CFC

**DECLARATION OF NANCY LYNN SCHROEDER IN SUPPORT OF
PLAINTIFFS' OPENING CLAIM CONSTRUCTION BRIEF**

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I, Nancy Lynn Schroeder, declare:

1. I am an attorney at the law firm of Wilmer Cutler Pickering Hale and Dorr LLP, counsel for Genentech, Inc. (“Genentech”) in Case Nos. 18-cv-00924-GMS (D. Del.) and 18-cv-01363-GMS (D. Del.). I am familiar with the facts set forth herein, and if called as witness, I could and would testify competently to those facts under oath.

2. I submit this declaration in support of Plaintiffs’ Opening Claim Construction Brief.

3. Attached as **Exhibit 1** is a true and correct copy of the *Curriculum Vitae* of Dr. Hansjörg Hauser.

4. Attached as **Exhibit 2** is a true and correct copy of Bruce Alberts *et al.*, MOLECULAR BIOLOGY OF THE CELL, Chapter 3 (4th Ed. 2002).

5. Attached as **Exhibit 3** is a true and correct copy of Mullan *et al.*, *Disulphide bond reduction of a therapeutic monoclonal antibody during cell culture manufacturing operations*, BMC Proc., 22(5) Suppl 8:P110 (2011).

6. Attached as **Exhibit 4** is a true and correct copy of Kao *et al.*, *Mechanism of Antibody Reduction in Cell Culture Production Processes*, Biotechnol Bioeng., 107(4):622-32 (2010).

7. Attached as **Exhibit 5** is a true and correct copy of Trexler-Schmidt *et al.*, *Identification and Prevention of Antibody Disulfide Bond Reduction During Cell Culture Manufacturing*, Biotechnol Bioeng., 106(3):452-61 (2010).

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8. Attached as **Exhibit 6** is a true and correct copy of Fahrner *et al.*, *Industrial Purification of Pharmaceutical Antibodies: Development, Operation, and Validation of Chromatography Processes*, Biotechnol Genet Eng Rev., 18:301-27 (2001).

9. Attached as **Exhibit 7** is a true and correct copy of Birch *et al.*, *Antibody Production*, Adv Drug Deliv Rev., 58(5-6):671-85 (2006).

10. Attached as **Exhibit 8** is a true and correct copy of Mun *et al.*, *Air Sparging for Prevention of Antibody Disulfide Bond Reduction in Harvested CHO Cell Culture Fluid*, *Biotechnol Bioeng.*, 112(4):734-42 (2015).

11. Attached as **Exhibit 9** is a true and correct copy of Hutterer *et al.*, *Monoclonal Antibody Disulfide Reduction During Manufacturing*, *MAbs.*, 5(4):608-13 (2013).

12. Attached as **Exhibit 10** is a true and correct copy of Chung *et al.*, *Effects of Antibody Disulfide Bond Reduction on Purification Process Performance and Final Drug Substance Stability*, *Biotechnol Bioeng.*, 114(6):1264-1274 (2017).

13. Attached as **Exhibit 11** is a true and correct copy of the *Curriculum Vitae* of Dr. Holly Prentice.

14. Attached as **Exhibit 12** is a true and correct copy of Gibco™ Cell Culture Basics Handbook.

15. Attached as **Exhibit 13** is a true and correct copy of Fan *et al.*, *Amino Acid and Glucose Metabolism in Fed-Batch CHO Cell Culture Affects Antibody Production and Glycosylation* (2014).

16. Attached as **Exhibit 14** is a true and correct copy of Wahrheit *et al.*, *Dynamics of Growth and Metabolism Controlled by Glutamine Availability in Chinese Hamster Ovary Cells* (2014).

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

EXECUTED this 11th day of January, 2019.

By: /s/ Nancy Lynn Schroeder
Nancy Lynn Schroeder