

Filed on behalf of: The Board of Trustees of the
Leland Stanford Junior University

Paper _____

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SEQUENOM, INC.
Petitioner,

v.

THE BOARD OF TRUSTEES OF
THE LELAND STANFORD JUNIOR UNIVERSITY
Patent Owner.

Case IPR2013-00390
Patent 8,195,415

PATENT OWNER RESPONSE

TABLE OF CONTENTS

I.	INTRODUCTION	1
II.	THE FAN '415 PATENT	1
III.	CLAIM INTERPRETATION	2
A.	Windows of Defined Length	3
1.	The Fan '415 Patent Examples Use “Windows” of Equal Length	4
2.	The Fan '415 Patent Explicitly States “Windows” Are of Equal Length.....	5
3.	Predefined Subsections of a Chromosome Are of Equal Length.....	7
4.	The Board’s Interpretation in the ’922 Interference Is Unduly Broad.....	8
B.	Sliding Window of a Predetermined Length.....	11
IV.	LO II DOES NOT ANTICIPATE THE FAN '415 PATENT CLAIMS.....	13
A.	Windows Are Distinct from Chromosomal Regions	13
1.	Windows in the Fan '415 Patent Are a Tool USED TO TEST for Aneuploidy	14
2.	Chromosomal Regions in Lo II Are BEING TESTED for Aneuploidy	15
3.	The Board’s Decision in the ’922 Interference Improperly Attributes Additional Functions to Windows of Defined Length	17
B.	The Lo II Normalization Method Shows Windows of Defined Length Are Not Disclosed	18
C.	Lo II Does Not Enable the Claim Term “Windows of Defined Length”	19
1.	Lo II Does Not Contain Any Working Examples	20
2.	Lo II Does Not Provide Any Guidance.....	20
3.	Undue Experimentation Is Required to Make and Use “Windows of Defined Length” Based on the Lo II Disclosure	21
V.	LO II IN COMBINATION WITH WANG DOES NOT RENDER CLAIMS 13, 16, OR 17 OBVIOUS	22

A. The Combination of Wang and Lo II Does Not Disclose a “Sliding Window a Predetermined Length”	22
B. The “Windows” Disclosed in Wang Are a Region Being Analyzed for Abnormal Distribution, and NOT a Subset of that Region	24
C. Wang Does Not Disclose the “Second Mean” of Claim 13, step (d).....	26
VI. LO II AND WANG IN COMBINATION WITH HILLIER AND/OR SMITH DOES NOT RENDER CLAIM 17 OBVIOUS	27
VII. LO I DOES NOT DISCLOSE THE CONCEPT OF “WINDOWS”	29
VIII. LO II IS NOT PRIOR ART TO THE FAN ’415 PATENT	29
A. Background.....	31
B. Collaboration with Dr. Yair Blumenfeld.....	32
C. Conception.....	33
D. Reduction to practice	33
1. Sequencing samples from females carrying non-aneuploid fetuses confirmed the conception by Drs. Fan and Quake	33
2. Sequencing samples from females carrying either aneuploid or non-aneuploid fetuses was an actual reduction to practice by Drs. Fan and Quake.....	36
3. The drafts of the PNAS paper evidence the reduction to practice by Drs. Fan and Quake	38
4. The Draft Manuscripts Disclose “Sliding Windows” and “Windows of Defined Length	60
IX. CONCLUSION	60

TABLE OF AUTHORITIES

Cases

<i>Amgen, Inc. v. Hoescht Marion Roussel, Inc.</i> ,	
314 F.3d 1313, 1354 (Fed. Cir. 2003)	19
<i>Berges v. Gottstein</i> ,	
618 F.2d 771, 776 (CCPA 1980).....	31
<i>Blicharz v. Hays</i> ,	
496 F.2d 603 (CCPA 1974).....	30
<i>Blicharz v. Hays</i> ,	
496 F.2d 603, 606 (CCPA 1974).....	30
<i>Breuer v. DeMarinis</i> ,	
558 F.2d 22, 29 (CCPA 1977),.....	31
<i>Clearvalue, Inc. v. Pearl River Polymers, Inc.</i> ,	
668 F.3d 1340, 1344 (Fed. Cir. 2012)	13
<i>Cooper v. Goldfarb</i> ,	
154 F.3d 1321 (Fed. Cir. 1998)	30
<i>Depuy Spine, Inc. v. Medtronic Sofamor Danek, Inc.</i> ,	
567 F.3d 1314, 1326 (Fed. Cir. 2009)	27
<i>Graham v. John Deere Co.</i> ,	
383 U.S. 1, 17-18 (1966).	22
<i>Hologic, Inc. v. SenoRx, Inc.</i> ,	
639 F.3d 1329, 1338 (Fed. Cir. 2011)	3
<i>In re Fine</i> ,	
837 F.2d 1071, 1076 (Fed. Cir. 1988).....	22
<i>In re Gurley</i> ,	
27 F.3d 551, 553 (Fed. Cir. 1994)	27
<i>In re Kubin</i> ,	
561 F.3d 1351, 1355 (Fed. Cir. 2009)	22
<i>In re Scheiber</i> ,	
587 F.2d 59, 61 – 62 (CCPA 1978);.....	30
<i>In re Spiller</i> ,	
500 F.2d 1170, 1178 (CCPA 1974).....	30
<i>In re Stempel</i> ,	
....	

241 F.2d 755, 760 (CCPA 1957).....	30
<i>In re Suitco Surface,</i>	
603 F.3d 1255, 1260 (Fed. Cir. 2010).	2
<i>In re Wands,</i>	
858 F.2d 731, 737 (Fed. Cir. 1988).	20
<i>InnovaPure Water, Inc. v. Safari Water Filtration Sys., Inc.,</i>	
381 F.3d 1111, 1119 (Fed. Cir. 2004).....	3
<i>Irdeto Access, Inc. v. Echostar Satellite Corp.,</i>	
383 F.3d 1295, 1303 (Fed. Cir. 2004)	3
<i>KSR Int'l Co. v. Teleflex Inc.,</i>	
550 U.S. 398, 418 (2007).	27
<i>Mahurkar v. CR Bard, Inc.,</i>	
79 F.3d 1572, 1578 (Fed. Cir. 1996)	30
<i>Philips v. AWH Corp.,</i>	
415 F.3d 1303, 1314 (Fed. Cir. 2005).....	3
<i>Price v. Symsek,</i>	
988 F.2d 1187 (Fed. Cir. 1993)	30
<i>Schriber-Schroth Co. v. Cleveland Trust Co.,</i>	
311 U.S. 211, 217 (1940)	2
<i>Wang Labs., Inc. v. Am. Online, Inc.,</i>	
197 F.3d 1377, 1382 (Fed. Cir. 1999)	3
Statutes	
35 U.S.C. §112, ¶4.....	14
Regulations	
37 C.F.R. §42.100(b).	3

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