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Filed on behalf of: Sequenom, Inc.

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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

SEQUENOM REPLY TO PATENT OWNER RESPONSE

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CASES

I. INTRODUCTION

The Petition filed on June 26, 2013 (Paper 1) shows that '415 Patent claims 1-6 and 8-12 are anticipated by U.S. Patent Publ. No. 2009/0029377 ("Lo II," Ex. 1002), and that claims 7 and 13-17 are obvious over Lo II in combination with, among others, U.S. Patent Publ. No. 2005/0221341 ("Shimkets," Ex. 1004), Wang et al. Proc Natl Acad Sci USA 99(25):16156-61 (2002) ("Wang," Ex. 1005), Hillier Nature Methods 5(2):183-8 (2008) ("Hillier," Ex. 1006), and Smith et al. BMC Bioinformatics 9:128 (2008) ("Smith," Ex. 1009).

In its Response (Paper 24), Patent Owner proposes that its claim term "windows" should include the unwritten limitation "of equal length." This construction is at odds with the plain meaning of the term and the disclosure of the '415 Patent, and would require the Board to reverse its construction from both the Decision dated December 9, 2013 (Paper 7) and the Decision on Motions dated April 7, 2014 in companion Interference No. 105,922 ("'922 Interference"). Patent Owner asserts that Lo II does not enable "windows of defined length," and that Wang does not disclose a "sliding window of predetermined length" and teaches away from the alignment of sequence tags with a single mismatch. These positions are based on minimal analysis and a fundamental misunderstanding of Lo II and Wang. In particular, Patent Owner fails to address the state of the art in 2008, a time at which the use of windows in conjunction with sequencing and alignment was well known. Finally, Patent Owner asserts that Lo II is not prior art against the '415 Patent because of an alleged earlier actual reduction to practice by Stephen Quake ("Quake") and Hei-Mun Christina Fan ("Fan"). This assertion also lacks

support, relying entirely on inventor testimony (Fan) and the statements of a contemporary witness (Yair Blumenfeld, "Blumenfeld") who fails to acknowledge that he understood or was even aware of the specific steps of the claimed methods.

II. CLAIMS 1-17 OF THE '415 PATENT ARE ANTICIPATED AND/OR OBVIOUS OVER THE CITED REFERENCES

A. The Broadest Reasonable Interpretation of "Window" Encompasses Any Predefined Subsection of a Chromosome

The Board has construed "window" to mean "a predefined subsection of a chromosome of sufficient length to allow determination of an abnormal chromosome distribution, if present, based on the number of sequence tags mapping to that chromosomal subsection." *Paper 7, p. 8, 2nd* ¶. In the companion '922 Interference, the Board construed "windows" as "predefined subsections of a chromosome" or "chromosomal regions." *Ex. 1088, p. 18, 2nd full* ¶. Despite the Board having ruled on this matter twice, Patent Owner argues that both decisions are wrong and that "windows of defined length" are limited to windows of equal length. *Paper 24, pp. 3-10*.

Patent Owner asserts that the "portions of the '415 patent specification, including the examples and figures, that discuss the use of windows make it clear that the windows are all of equal length in a given experiment." *Paper 24, p. 4, 1st full* ¶. The Interference Board rejected this argument, stating "[w]hen we look to the specification for guidance in construing claim terms, we avoid limitations that are reflected only in specific embodiments, particularly if those embodiments are not reflected in the claims." *Ex. 1088, ¶ spanning pp. 16-17*. Further, Example 8 in the '415 Patent contradicts Patent Owner's assertion regarding the examples by

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