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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

HEI-MUN CHRISTINA FAN and STEPHEN QUAKE
Junior Party
(Patent 8,195,415),

v.

YUK-MING DENNIS LO, ROSSA WAI KWUN CHIU, and KWAN CHEE
CHAN
Senior Party
(Application 13/070,266),

Patent Interference No. 105,922 (DK)
(Technology Center 1600)

Decision on Motions

Bd. R. 125(a)

*Before, FRED E. McKELVEY, RICHARD E. SCHAFER, and DEBORAH KATZ,
Administrative Patent Judges.*

KATZ, Administrative Patent Judge.

STANFORD EXHIBIT 2116
SEOUENOM v. STANFORD

Interference 105,922

I. Statement of the Case

The interference is before a panel for consideration of the pending non-priority motions. An oral argument was held on 25 February 2014. (Transcript, Paper 99.)

Hei-Mun Christina Fan and Stephen Quake (“Fan”) present Motion 1 (Paper 26) to argue that it should be accorded an earlier constructive reduction to practice (*i.e.*, benefit for the purpose of priority) of application 61/098,758, which was filed 20 September 2008. Yuk-Ming Dennis Lo, Rossa Wai Kwun Chiu, and Kwan Chee Chan (“Lo”) do not oppose Fan Motion 1. We grant Fan Motion 1.

Fan also presents Motion 2 (Paper 27) and Motion 3 (Paper 28), arguing, respectively, that the specification of the involved Lo application lacks written description and enabling support for the involved Lo claims and that Lo should not have been accorded benefit (*i.e.*, an earlier constructive reduction to practice) of its earlier applications. We deny Fan Motions 2 and 3.

Finally, Fan presents Motion 4 (Paper 31), arguing that Fan claim 14 should not have been designated as corresponding to the Count. We deny Fan Motion 4.

Lo does not present any motions in this phase of the interference.

II. The Parties

a. Fan

Fan is involved based on the patent 8,195,415 (“the Fan ’415 patent”), which issued 5 June 2012, from application 12/696,509, filed 29 January 2010. Upon declaration, Fan was accorded the benefit of application 12/696,509, filed

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29 January 2010, and application 12/560,708, filed 16 September 2009.

(Declaration, Paper 1.)

Fan represents that its involved application is assigned to The Board of Trustees of the Leland Stanford Junior University. Fluidigm Corporation and Verinata Health, Inc, a wholly owned subsidiary of Illumina, Inc., are identified as licensees. (Paper 9.) Fan also represents that the United States government has certain rights in the patent. (*Id.*)

Fan relies on the testimony of J. Chris Detter, Ph.D. (*See* Declaration of John Chris Detter, Ph.D. (“Detter Decl.”), Exh. 2050.) Dr. Detter testifies that he has a Ph.D. in molecular genetics and microbiology and that he has held several positions leading genomic sequencing and computational biology groups. (Detter Decl., Exh. 2050, at ¶¶ 3-5.) Dr. Detter testifies that he is currently the Genome Sciences Center Director and Group Leader (B-6) and the Acting Bioscience Deputy Divisional Leader, responsible for programmatic, strategic, and tactical mission areas for bioscience at Los Alamos National Laboratory. (*Id.* at ¶ 6.) Dr. Detter’s curriculum vitae shows that he has authored numerous research papers regarding genome sequencing of various organisms. (Curriculum Vitae, Exh. 2051; *see* Detter Decl., Exh. 2050, ¶ 8.) In light of his testimony, Dr. Detter is qualified to testify as an expert about the subject matter of this interference.

b. Lo

Lo is involved based on application 13/070,266 (“the Lo ’266 application”), which was filed 23 March 2011. Lo was accorded the benefit of 12/614,350,

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which was filed 6 November 2009, and application 12/178,181, which was filed 23 July 2008.

Lo represents that at least application 13/070,266 is assigned to The Chinese University of Hong Kong and that Sequenom, Inc. is a licensee. (Paper 4.)

Lo relies on the testimony of Stacey Bolk Gabriel, Ph.D. (*See* Declaration of Stacey Bolk Gabriel, Ph.D. (“Gabriel Decl.”), Exh. 1076.) Dr. Gabriel testifies that she received a Ph.D. degree in genetics in 1998. (*Id.*, ¶ 10.) She testifies further that she has held several positions related to mapping and sequencing the human genomes. (*Id.*, ¶¶ 12-18.) Dr. Gabriel testifies that she is currently the Director of the Genomics Platform of the Broad Institute, which according to Dr. Gabriel, is the largest genome center in the United States. (*Id.* at ¶ 19.) Dr. Gabriel testifies that she has served on several editorial and advisory boards related to genomic research and that she has authored over 100 peer-reviewed publications involving the application of sequencing technology to the study of human disease. (*Id.* at ¶¶ 20-22.) In light of her testimony, Dr. Gabriel is qualified to testify as an expert about the subject matter of this interference.

c. Related Proceedings

The involved Lo ’266 application and involved Fan ’415 patent are related to applications and patents involved in concurrent Interferences 105,920, 105,923, and 105,924.¹ The Fan (referred to as “Quake”) patents and applications in those

¹ Interference 105,920 involves Lo application 13/070,275 and Quake patent 8,008,018. Similarly, Interference 105,923 involves Quake application 12/393,833 and Lo applications 12/178,181; 13/070,240; 12/614,350; and 13/070,251.

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interferences are not in the same direct lineage as the involved Fan '415 patent, but have the same real party-in-interest. As in the current interference, the counts of these concurrent interferences are drawn to methods of detecting chromosomal abnormalities.

Inter Partes Review (“IPR”) 2013-00390 is also related to this interference. Review was instituted following a petition filed by Sequenom, Inc. (the real party-in-interest of Lo) against the patentability of the claims of currently involved Fan '415 patent. Sequenom, Inc. argues that the Fan '415 patent claims are unpatentable over Lo application 12/178,181 (published as U.S. Patent Application Publication 2009/0029377), which is a parent of the Lo '266 application involved in this interference. A final decision has not been entered in the IPR.

III. The Subject Matter

The parties claim methods of testing for an abnormal distribution of chromosomes in a person's cells, a condition called “aneuploidy.” The claimed methods can be used to test for conditions including Down Syndrome, in which chromosome 21 is aneuploid, with three copies instead of the normal two copies. In the past, these chromosomal abnormalities were diagnosed with invasive procedures such as amniocentesis or chorionic villus sampling. The parties' claims are drawn to methods that allow for the diagnosis of aneuploidies with a simple blood test.

In general, the methods include the determination of a ratio between the number of different chromosomes in the blood sample without distinguishing

Interference 105,924 involves Lo application 13/417,119 and Quake application

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