BEFORE THE PATENT TRIAL AND APPEAL BOARD

ILLUMINA, INC.

Petitioner

v.

THE SCRIPPS RESEARCH INSTITUTE

Patent Owner

Case IPR2016-01619

Patent 6,060,596

PATENT OWNER THE SCRIPPS RESEARCH INSTITUTE

DECLARATION OF DONALD MONTGOMERY, PHD

I, Donald Montgomery, declare as follows:

1. I am currently the President of Nanomaterials Discovery Corporation, aka NDCPower, in Seattle Washington and Cheyenne, Wyoming. I received my AB degree in chemistry at Grinnell College in 1984, a Ph.D. degree in chemistry from Caltech in 1990 and was a post-doctoral fellow in physics at The Joint Institute for Laboratory Astrophysics, a joint institute between the University of Colorado (Boulder) and the National Institute for Standards and Technology for three years. I began my industry career as a scientist at Nanogen in San Diego in 1994. I founded a genetic analysis DNA microarray company called CombiMatrix in 1996 to make oligonucleotides on electrode array solid phases using local electrochemical reactions. CombiMatrix was founded based on my inventions to synthesize oligonucleotides and other linear polymers on solid supports, I am not being compensated for my time spent reviewing documents and preparing this statement because it is part of my exchanging my efforts for legal work being performed for NDCPower by counsel for Patent Owner, Jeff Oster. I do not receive any compensation or consideration depending on the outcome of this proceeding or a concurrent litigation proceeding involving a TSRI patent.

2. I have reviewed (a) Dower et al. patent (Ex. 1008), (b) the Petition; (c) the Stoltz Declaration (Ex. 1007) paragraphs 14 through 15 regarding a person of ordinary skill in the art (POSA) in 1992; (d) Stoltz Declaration (Ex. 1007)

paragraphs 103-122 regarding what Dr. Stoltz alleges a person of ordinary skill in the art familiar with Dower et al. (such as me) and Needels et al. (Ex. 2008) could or would have done or have been motivated to do. Based upon my experiences synthesizing bifunctional molecules and linear polymers at CombiMatrix in the later 1990's, I did not believe that switching to a solution based combinatorial screening (such as the system described in Brenner and Lerner Ex. 2001, which was published in June 1992) would provide any advantages over Dower/Affymax with a solid phase screening. Therefore, the speculation by Dr. Stoltz in Ex. 1007 paragraphs 103-122 does not reflect my first-hand experience of doing combinatorial screening with any preference to solution-based screening.

3. I have reviewed the '596 patent specification and claims for the purposes of determining what I think is meant by the term "linker molecule" or the B component of the A-B-C structure in claim 1. Based on my review of the entire specification, it is clear to me that the specification distinguishes polymers, such as oligonucleotides and peptides that are made from multiple repeating units or "mers," from its use of the term "molecule." A molecule is a defined chemical structure. As a person who was actively working in the field of combinatorial chemical synthesis in the 1990's, I did not consider a solid phase bead structure as a linker molecule.

4. As is shown in Dower (Ex. 1008), Dower/Affymax accomplished combinatorial screening after a biological assay by using a FACS cell sorter to segregate beads with bound antibodies. There was no need and no suggestion that Dower would or should replace its solid phase method with a soluble bifunctional molecular linker for soluble combinatorial screening.

5. The passage in Needels et al. (Ex. 2006) acknowledging the Brenner and Lerner publication (Ex. 2001) and what it provides in the form of a bifunctional molecule for soluble combinatorial screening does not indicate, in my opinion, that it is obvious over the solid phase bead with two polymers attached in Dower and Needels et al. (Ex. 2006). Because, for example, the assays used for combinatorial screening for solid phase or for solution are materially different.

6. I read the file history of the priority patent application of the '596 patent family (Ex. 2003) and found a restriction requirement indicating that the method to synthesize the bifunctional molecule and the bifunctional molecule composition were restricted into separately patentable inventions. The applicants did not fight this restriction requirement.

7. I have reviewed Nielson et al. (Ex. 2005) that showed, in my opinion, that the Nelson linker molecule did not work well because the amino acid addition was not efficient. Based on these findings, the authors speculated that the reason was due to steric hindrance.

8. I declare that all statements made herein of my knowledge are true, and that all statements made on information and belief are believed to be true, and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: 21 November 2016

By: 

Donald Montgomery, Ph.D.