IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re: US. Patent of Jingyue Ju. et al.

Patent No.: 7,790,869 Appl. No.: 11/810,509

Issue Date: September 7, 2010

For: MASSIVE PARALLEL METHOD FOR DECODING DNA

AND RNA

MAIL STOP PATENT BOARD
Patent Trial and Appeal Board
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION FOR INTER PARTES REVIEW OF U.S. PAT. No. 7,790,869

Inter partes review of U.S. Patent 7,790,869 ("the '869 patent") pursuant to 35 US.C. § 311 and 37 C.F.R. §§ 42.1 et seq. is respectfully requested by Petitioner Illumina, Inc. ("Petitioner"). Petitioner submits that the attached prior art (attached as Exhibits 1002 to 1020) renders claims 12-13, 15-17, 20-26, 28-29, 31, and 33 of the '869 patent invalid under 35 U.S.C. §§ 102(a), 102(b), 102(e), and 103(a) and raises a reasonable likelihood that Petitioner will prevail with respect to at least one of claims 12-13, 15-17, 20-26, 28-29, 31, and 33 of the '869 patent. Accordingly, it is requested that inter par Columbia Ex. 2041 Illumina, Inc. v. The Trustees of Columbia University in the City of New York



IPR2020-01177

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re: US. Patent of Jingyue Ju. et al.

Patent No.: 7,790,869 Appl. No.: 11/810,509

Issue Date: September 7, 2010

For: MASSIVE PARALLEL METHOD FOR DECODING DNA

AND RNA

MAIL STOP PATENT BOARD
Patent Trial and Appeal Board
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450

PETITION FOR INTER PARTES REVIEW OF U.S. PAT. No. 7,790,869

Inter partes review of U.S. Patent 7,790,869 ("the '869 patent") pursuant to 35 US.C. § 311 and 37 C.F.R. §§ 42.1 *et seq.* is respectfully requested by Petitioner Illumina, Inc. ("Petitioner"). Petitioner submits that the attached prior art (attached as Exhibits 1002 to 1020) renders claims 12-13, 15-17, 20-26, 28-29, 31, and 33 of the '869 patent invalid under 35 U.S.C. §§ 102(a), 102(b), 102(e), and 103(a) and raises a reasonable likelihood that Petitioner will prevail with respect to at least one of claims 12-13, 15-17, 20-26, 28-29, 31, and 33 of the '869 patent. Accordingly, it is requested that *inter partes* review be instituted and that claims 12-13, 15-17, 20-26, 28-29, 31, and 33 of the '869 patent be found invalid.



TABLE OF CONTENTS

I.	INT	INTRODUCTION		
II.	REQUIREMENTS FOR <i>INTER PARTES</i> REVIEW UNDER 35 U.S.C. § 312 and 37 C.F.R. §§ 42.1 - 42.123			
III.	OVERVIEW OF THE '869 PATENT AND SUMMARY OF INVALIDATING PRIOR ART REFERENCES			
	A.	Summary of the '869 Patent and Invalidating Prior Art	9	
	B.	Scope and Content of the Prior Art Relating to Nucleotides and dNTPs Having Deaza-Substituted Bases	14	
	C.	Summary of the Prosecution History of the '869 Patent	16	
IV.		TEMENT REGARDING CONSTRUCTION OF THE ALLENGED CLAIMS	17	
	A.	Claim Construction Standard	17	
	B.	Discussion of Individual Claim Terms	18	
V.	CHA OF T LIK	CAILED EXPLANATION OF PETITIONER'S BASIS FOR ALLENGING CLAIMS 12-13, 15-17, 20-26, 28-29, 31, and 33 THE '869 PATENT DEMONSTRATING A REASONABLE ELIHOOD OF PREVAILING AGAINST THE CLAIMS OF E '869 PATENT	20	
	1.	Ground for Challenge 1 - Claims 12-13, 15-17, 20-26, 28-29, 31, and 33 of the '869 patent are invalid as anticipated by Tsien	21	
	2.	Ground for Challenge 2 - Claims 15 and 16 of the '869 patent are invalid as obvious in view of Tsien and Prober I	27	
	3.	Ground for Challenge 3 - Claims 15 and 16 of the '869 patent are invalid as obvious in view of Tsien and Prober II	29	
	4.	Ground for Challenge 4 - Claims 12-13, 15-17, 20-26, 28-29, 31, and 33 of the '869 patent are invalid as anticipated by Dower	22	
		D_{0} W_{0}	<i>5</i> 2	



5.	Ground for Challenge 5 - Claims 15 and 16 of the '869 patent are invalid as obvious in view of Dower and Prober I	39
6.	Ground for Challenge 6 - Claims 15 and 16 of the '869 patent are invalid as obvious in view of Dower and Prober II	40
7.	Ground for Challenge 7 - Claims 12-13, 17, 20-26, 28-29, 31, and 33 of the '869 patent are invalid as anticipated by Rabani	42
8.	Ground for Challenge 8 - Claims 15 and 16 of the '869 patent are invalid as obvious in view of Rabani and Prober I	46
9.	Ground for Challenge 9 - Claims 15 and 16 of the '869 patent are invalid as obvious in view of Rabani and Prober II	47
10.	Ground for Challenge 10 - Claims 12-13, 15-17, 20-26, 28-29, 31, and 33 of the '869 patent are invalid as anticipated by Stemple II	47
11.	Ground for Challenge 11 - Claims 12-13, 15-17, 20-26, 28-29, 31, and 33 of the '869 patent are invalid as anticipated by Stemple III.	54
12.	Ground for Challenge 12 - Claims 15 and 16 of the '869 patent are invalid as obvious in view of Stemple II and Anazawa	54
13.	Ground for Challenge 13 - Claims 15 and 16 of the '869 patent are invalid as obvious in view of Stemple III and Anazawa et al.	55
14.	Ground for Challenge 14 - Claims 15 and 16 of the '869 patent are invalid as obvious in view of Stemple II and Prober I	55
15.	Ground for Challenge 15 - Claims 15 and 16 of the '869 patent are invalid as obvious in view of Stemple III and Prober I	56
16.	Ground for Challenge 16 - Claims 15 and 16 of the '869 patent are invalid as obvious in view of Tsien and Hobbs	57
17.	Ground for Challenge 17 - Claims 15 and 16 of the '869 patent	58



	18.	Ground for Challenge 18 - Claims 15 and 16 of the '869 patent are invalid as obvious in view of Stemple II and Hobbs et al	59
	19.	Ground for Challenge 18 - Claims 15 and 16 of the '869 patent are invalid as obvious in view of Stemple III and Hobbs et al	59
VI.	CON	CLUSION	59



DOCKET

Explore Litigation Insights



Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time** alerts and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.

