



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549

March 8, 2012

Via E-Mail

Frederick W. Kanner, Esq.
Dewey & LeBoeuf LLP
1301 Avenue of the Americas
New York, NY 10019

**Re: Illumina, Inc.
Amended Preliminary Proxy Statement on Schedule 14A
Filed on March 7, 2012
File No. 1-35406**

Dear Mr. Kanner:

We have reviewed your filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Schedule 14A

Proposal 1: Election of Directors, page 13

Additional Information, page 13

1. We note that the persons designated as proxies intend to vote the proxy card "FOR" the election of each of the four nominees above (including with respect to elections for any newly created directorships that may arise at the meeting) unless the stockholder indicates on the proxy that the vote should be withheld from any or all of these nominees. As discussed telephonically, please revise to specifically describe how you intend to use

Frederick W. Kanner, Esq.
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March 8, 2012
Page 2

the proxies to elect your nominees under Proposal 1 to fill the two newly created directorships in Proposal 6. Please address whether you intend to apply the votes of only unmarked proxy cards or all proxy cards you receive in this manner. In addition, please advise us of your basis under Delaware state law for filling the two newly created directorships in this manner. Please revise to include similar disclosure under "Illumina's Board of Directors' Response to Roche's Proposals 4, 5 and 6" and on the proxy card.

Please direct any questions to me at (202) 551-3411. You may also contact me via facsimile at (202) 772-9203. Please send all correspondence to us at the following ZIP code: 20549-3628.

Sincerely,

/s/ Peggy Kim

Peggy Kim
Special Counsel
Office of Mergers & Acquisitions