



DIVISION OF  
CORPORATION FINANCE

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

March 2, 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 1, 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

How many votes are required to approve each proposal, page 7

1. Regarding Proposal 6, we note that Roche's nominees to fill the two newly created directorships have consented to being named in your proxy statement and to serve if elected. Please revise the discussion of the treatment of votes that may be cast to address withheld votes. Refer to Rule 14a-4(b)(2). Please also revise, here and on page 17, to clarify whether you are recommending that security holders withhold their votes with respect to both nominees, or advise.

Proposals 4, 5, and 6: Roche's Board of Directors Expansion Proposals, page 17  
Proposal 6, page 17

2. Please revise to include the information required by Item 7 of Schedule 14A for Mr. Earl Collier and Mr. David Dodd, or refer security holders to Roche's proxy statement for this information.

Illumina's Board of Director's Response to Roche's Proposals 4, 5 and 6, page 17

3. We note that in the event that Proposals 4 and 5 are approved but Proposal 6 is not approved, the two new directorships created pursuant to Proposal 4 will remain vacant until the next meeting of Illumina's stockholders at which directors are to be elected. Please revise to clarify that the two new seats would remain vacant until the next annual meeting.

Stock Ownership of Principal Stockholders and Management, page 34

4. Please revise to update the beneficial ownership information as of the most recent date practicable. Refer to Item 403 of Regulation S-K and Item 6(d) of Schedule 14A.

Form of Proxy

5. Please revise Proposal 6 on the proxy card to identify the two Roche nominees and provide a means for security holders to withhold authority to vote for each nominee. Refer to Rule 14a-4(b)(2). Please also revise your recommendation on Proposal 6.

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