



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

DIVISION OF  
CORPORATION FINANCE

Mail Stop 4645

September 6, 2016

Mark B. Carbeau  
Chief Executive Officer  
Interleukin Genetics, Inc.  
135 Beaver Street  
Waltham, MA 02452

**Re: Interleukin Genetics, Inc.  
Preliminary Proxy Statement on Schedule 14A  
Filed August 30, 2016  
File No. 001-32715**

Dear Mr. Carbeau:

We have limited our review of your filing to those issues we have addressed in our 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 these comments within ten business days by providing the requested information or advise us as soon as possible when you will respond. If you do not believe our comments apply to your facts and circumstances, please tell us why in your response.

After reviewing your response to these comments, we may have additional comments.

General

1. Please expand your disclosures under Proposal 4 and Proposal 5 to address the effects of increasing the number of authorized but unissued shares of common stock upon the rights of existing shareholders, including any possible dilutive effect to shareholders upon issuance of the authorized shares and anti-takeover effects. Refer to Item 11(d) of Schedule 14A and SEC Release No. 34-15230 (October 13, 1978).
2. We note your disclosure on page 28 that the board's decision to effect the increase in the number of authorized shares of common stock will be based on a number of factors, including whether it decides to effect a reverse stock split. Please revise your disclosure under Proposal 4 and expand your disclosure under Proposal 5 to specify how the decision to implement each proposal will affect the board's decision to implement the other proposal.

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We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Exchange Act of 1934 and all applicable Exchange Act rules require. Since the company and its management are in possession of all facts relating to a company's disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please contact Irene Paik at (202) 551-6553 or Erin Jaskot at (202) 551-3442 with any questions.

Sincerely,

/s/ Erin K. Jaskot, *for*

Suzanne Hayes  
Assistant Director  
Office of Healthcare and Insurance

cc: Brian Keane  
Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.