



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

DIVISION OF
CORPORATION FINANCE

Mail Stop 4631

May 10, 2017

Via E-Mail

James S. Marcelli
President and Chief Operating Officer
Lightwave Logic, Inc.
1831 Lefthand Circle, Suite C
Longmont, Colorado 80501

**Re: Lightwave Logic, Inc.
Registration Statement on Form S-1
Filed April 19, 2017
File No. 333-217384**

Dear Mr. Marcelli:

We have limited our review of your registration statement 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 this letter by amending your registration statement and providing the requested information. 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 registration statement and the information you provide in response to these comments, we may have additional comments.

General

1. We note you have multiple outstanding registration statements related to resale transactions by Lincoln Park Capital Fund, LLC. In the interest of simplified disclosure, please consider the application of Securities Act Rule 429, which permits the filing of an amendment that contains a single prospectus covering the shares in this offering and in your outstanding offerings. Absent the use of Rule 429, please revise your prospectus cover page to (i) concisely reference each of your outstanding registration statements and (ii) disclose the aggregate number of shares available for resale under each offering.

The Lincoln Park Transaction, page 3

2. Please revise your disclosure in this section and the related disclosure in the body of your prospectus on page 62 to discuss the previous registration statements you filed related to securities to be resold by Lincoln Park Capital Fund, LLC.

Selling Securityholder, page 65

3. Please revise footnote (1) to the selling securityholder table to discuss when and how the delineated securities of Lightwave Logic were acquired by Lincoln Park Capital Fund, LLC and the registration statement(s), if any, upon which such securities are registered.
4. Please explain how you calculated the percentage of outstanding shares beneficially owned after the offering by Lincoln Park Capital Fund, LLC.

We remind you that the company and its management are responsible for the accuracy and adequacy of their disclosures, notwithstanding any review, comments, action or absence of action by the staff.

Refer to Rules 460 and 461 regarding requests for acceleration. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

Please contact Frank Pigott (Staff Attorney) at 202-551-3570 or me at 202-551-3397 with any questions.

Sincerely,

/s/ Jay Ingram

Jay Ingram
Legal Branch Chief
Office of Manufacturing and
Construction

cc: Clayton Parker
K&L Gates LLP