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

DIVISION OF
CORPORATION FINANCE

September 23, 2014

Via E-mail
Thomas W. Burns
President and Chief Executive Officer
Glaukos Corporation
26051 Merit Circle, Suite 103
Laguna Hills, California 92653

Re: Glaukos Corporation
Amendment No. 1 to Draft Registration Statement on Form S-1
Submitted September 9, 2014
CIK No. 0001192448

Dear Mr. Burns:

We have reviewed your amended draft registration statement 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 providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. 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 the information you provide in response to these comments and your amended draft registration statement or filed registration statement, we may have additional comments.

Prospectus Summary, page 1

1. We note your disclosure in response to prior comment 1. Please expand your disclosure under "Secure FDA approvals with expanded indications for our pipeline iStent products" to clarify whether you are or will be seeking FDA approval for insertion of your iStent product on a stand-alone basis and not only in conjunction with cataract surgery.

Use of Proceeds, page 55

2. We see from your revised disclosure in response to prior comment 6 that the purchase price you are paying for the DOSE assets was based on the results of a valuation conducted by an independent third-party. Please tell us the nature and extent of your reliance on the third party for that purpose. Also, please describe to us your

consideration of Question 141.02 of the Compliance and Disclosure Interpretations on Securities Act Sections.

3. We note your revisions in response to prior comment 10; however, it remains unclear whether the amount of proceeds to be used to fund your clinical studies will be sufficient to complete all of the clinical studies described in your prospectus. Please clarify whether the proceeds you will allocate to fund clinical studies will be sufficient to complete the clinical trials you disclose in your prospectus. If there is uncertainty, please make that clear and indicate that you may need to raise additional funds to complete your trials.

Our Solution, page 86

4. We note from your response to prior comment 16 that patients implanted with your iStent product could undergo an MRI "so long as the conditions specified on the product label are followed." Please disclose the conditions that would need to be followed and whether and how the patients would actually receive such label. Please disclose any risks if the conditions were not followed.

Financial Statements

Note 2. Research and Development Expenses, page F-16

5. Please refer to prior comment 24. We note your response that you began producing "at-risk inventory of iStents designated for sale only in the United States" prior to the PMA approval. However, it is not clear to us how you have concluded that the possible sale of the inventory in the United States after receiving PMA approval was not considered an alternative future use of the product. Specifically we note that you increased the production of iStents inventory in anticipation of PMA approval and not as a research and development activity as discussed within FASB ASC 730-10-25-2(a). Please quantify for us the amount of iStents inventory that was included within Research & Development expense prior to the PMA approval that was subsequently sold and quantify the amount of sales recorded without a corresponding iStents cost of sales.

Note 5. Notes Payable, page F-23

Subordinated Notes Payable in Connection with GMP Vision Solutions, page F-24

6. Please refer to prior comment 26. We note your response to our comment that that expiration date of the last patent is April 2020 or approximately 7 years from the Buyout Agreement signing date. Please also tell us the expiration date of all the significant patents under the agreement. In this regard, we note your statement that "it is difficult to reliably project the level of revenues beyond the 2014 – 2018 timeframe." Accordingly, please tell us how you were able to conclude that the projection of the royalty payment

stream over five years was the most reliable means to establish the amortization period for the intangible asset.

General

If you intend to respond to these comments with an amended draft registration statement, please submit it and any associated correspondence in accordance with the guidance we provide in the Division's October 11, 2012 announcement on the SEC website at casciohttp://www.sec.gov/divisions/corpfin/cfannouncements/drsfilingprocedures101512.htm.

You may contact Kevin Kuhar at (202) 551-3662 or Brian Cascio, Accounting Branch Chief, at (202) 551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Tim Buchmiller at (202) 551-3635 or Mary Beth Breslin at (202) 551-3625 with any other questions.

Sincerely,

/s/ Mary Beth Breslin for

Amanda Ravitz
Assistant Director

cc (via e-mail): Yvan-Claude Pierre, Esq.
Reed Smith LLP