



DIVISION OF  
CORPORATION FINANCE

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

December 19, 2014

Via E-mail

John B. Simpson, Ph.D., M.D.  
Chief Executive Officer  
Avinger, Inc.  
400 Chesapeake Drive  
Redwood City, CA 94063

**Re: Avinger, Inc.  
Amendment No. 1 to Draft Registration Statement on Form S-1  
Submitted December 11, 2014  
CIK No. 0001506928**

Dear Dr. Simpson:

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.

Graphics, page 1

1. We see from your response to prior comment 1 and your revised graphics that you have included the requested disclosure in footnotes whereas our comment requested that the disclosure be made prominent. Please revise your graphics so that the text disclosing that your Pantheris trial is not complete and that it is intended to support a submission for FDA approval in the second half of 2015 is at least as prominently disclosed as your other disclosure in the graphics. Also, if the graphics and related disclosure in the right side of the front graphics relate to products that have not been approved by the FDA please include equally prominent disclosure regarding the regulatory status of the products shown in those graphics.

John B. Simpson, Ph.D., M.D.  
Avinger, Inc.  
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Director Compensation, page 105

2. We have reviewed your response to prior comment 19 where you indicated that the company did not grant any options in 2014. Please tell us how your response reconciles to your disclosure in the last sentence of the first paragraph of this section that “[i]n fiscal year 2014, [you] granted each or [your] non-employee directors a non-statutory stock option to purchase shares of [your] common stock.”

You may contact Li Xiao at (202) 551-4391 or Gary Todd, Senior Accountant, at (202) 551-3605 if you have questions regarding comments on the financial statements and related matters. Please contact Tim Buchmiller at (202) 551-3635 or Geoff Kruczek, Senior Attorney, at (202) 551-3641 with any other questions.

Sincerely,

/s/ Geoff Kruczek for

Amanda Ravitz  
Assistant Director

cc (via e-mail): Philip H. Oettinger, Esq.  
Wilson Sonsini Goodrich & Rosati  
Professional Corporation