



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

DIVISION OF
CORPORATION FINANCE

October 23, 2014

Via E-mail
Michael DeMane
Chief Executive Officer
Nevro Corp.
4040 Campbell Avenue
Menlo Park, CA 94025

**Re: Nevro Corp.
Amendment No. 1 to Registration Statement on Form S-1
Filed October 10, 2014
File No. 333-199156**

Dear Mr. DeMane:

We have reviewed your 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 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 the registration statement and the information you provide in response to these comments, we may have additional comments.

If we fail to comply with our obligations, page 30

1. We note your revisions in response to prior comment 6; however, it remains unclear how an investor could know from your disclosure the substance of response 33 in your letter to us dated September 16, 2014. Please revise to clarify, and as appropriate, to indicate the features of your product that rely on the Mayo license in a manner that permits investors to understand the importance and effect of the license.

CCC Supply Agreement, page 103

2. Please tell us whether you have satisfied the minimum order requirement to restrict CCC from the activity mentioned in the penultimate sentence of the first paragraph. Also provide us your analysis of the likelihood that you will not satisfy the requirement in future periods.

Director Compensation, page 121

3. In an appropriate section of your prospectus, please disclose the IPO awards mentioned in sections 2(a) and 2(c) of exhibit 10.19.

Principal Stockholders, page 142

4. Please provide us your analysis of why it is appropriate to exclude from your beneficial ownership disclosure the shares mentioned in footnote (14) added to the table if those shares underlie options that will be exercisable within 60 days. We note the vesting terms that you disclose on pages 122 and 128.

Exhibit 10.4(b)

5. Please tell us which exhibit represents the Agreement for Manufacturing Conversion that exhibit 10.4(b) identifies as the document that defines "Second Source."

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 Act of 1933 and all applicable Securities 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.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed

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public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Eric Atallah, Staff Accountant, at (202) 551-3663 or Kevin Vaughn, Accounting Branch Chief, at (202) 551-3643 if you have questions regarding comments on the financial statements and related matters. Please contact Tom Jones at (202) 551-3602 or me at (202) 551-3617 with any other questions.

Sincerely,

/s/ Russell Mancuso

Russell Mancuso
Branch Chief

cc (via e-mail): Michael W. Hall, Esq.