



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

DIVISION OF
CORPORATION FINANCE

March 20, 2017

Via E-Mail

Catherine Lee
SVP, General Counsel and Corporate Secretary
Senomyx, Inc.
4767 Nexus Centre Drive
San Diego, CA 92121

**Re: Senomyx, Inc.
PREC14A filed on March 10, 2017
File No. 0-50791**

Dear Ms. Lee:

The Office of Mergers and Acquisitions has conducted a review of the filing listed above. Our comments follow. All defined terms have the same meaning as in the proxy statement listed above.

Please respond to this letter by revising your filing, by providing the requested information, or by advising us when you will provide the requested response. 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 filing and the information you provide in response to these comments, we may have additional comments.

Preliminary Proxy Statement filed on March 10, 2017

General

1. Please file the form of proxy that shareholders will use to vote for your nominees.
2. Update the proxy statement to reflect the fact that the Nominating Stockholders have now filed a proxy statement and that they appear to be soliciting for seven rather than eleven nominees.

3. Consider including a background section expanding the description of your contacts with the Nominating Stockholders leading up to this contested solicitation.

Did the Company receive stockholder communications regarding the election of directors?, page 6

4. See our last comment above. Clarify your statement here and in other places in the proxy materials that the Nominating Stockholders indicated to you that they did not intend to proceed with a solicitation for the election of their nominees. Explain what was said, how it was communicated to you, and in what context. We may have further comment.

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 Senomyx is in possession of all facts relating to their disclosure, it is responsible for the accuracy and adequacy of the disclosures made.

If you have any questions regarding these comments or your filings in general, please feel free to contact me at (202) 551-3263.

Sincerely,

/s/ Christina Chalk

Christina Chalk
Senior Special Counsel
Office of Mergers and Acquisitions

cc: Charles Blair, Esq. (via email)
Kai Haakon E. Liekefett, Esq. (via email)
Lawrence Elbaum, Esq. (via email)

Catherine Lee, Esq.
Senomyx, Inc.
March 20, 2017
Page 3