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

DIVISION OF
CORPORATION FINANCE

July 21, 2014

VIA E-mail
Charles Farrahar
Chief Financial Officer
Medovex Corp.
1735 Buford Hwy., Ste 215-113
Cumming, Georgia 30041

Re: Medovex Corp
Amendment No. 1 to Confidential Draft Registration Statement on Form S-1
Submitted July 8, 2014
CIK No. 0001591165

Dear Mr. Farrahar:

We have reviewed your 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.

General

1. With regard to your prototype, please clarify whether you have an actual physical prototype, or merely an artist rendering or computer-generated concept of your prototype. If you have a physical prototype, is it functional, and if so, in what respect? If this is a computer generated image, please explain how you believe it helps an investor understand your company or an investment in you.

2. We note that many of your descriptions of development milestones, including timelines and costs, do not specifically address regulatory clearance. Since clearance for your product appears to be a gating factor to your ability to achieve sales, please revise to include, in each discussion of your development plan, an equally prominent discussion of the expected financial and timing impact of seeking regulatory approval.

Initial Product, page 1

3. We note your response to comment 9, however it does not appear you have addressed the question of whether the study also covered safety. Please clarify. Also, please clearly state, if true, that the hand held device that Dr. Haufe conceptualized was not used in the study.

4. Please clarify what your "initial research" has been with the hand held device. Specifically, if the goal of the device is reduction or elimination of pain, it is not clear how your research could confirm the achievement of this goal with non-living tissue.

5. We note your response to prior comment 10 that "Facet Joint Pain" treatment would be covered by reimbursement, yet it remains unclear whether your particular hand held device would be covered by reimbursement. Please revise to clarify.

6. In addition, if you have not produced a working prototype, it is still unclear how you can form a reasonable basis upon which you have made your sales price per unit prediction. Please revise or advise.

The Series B Warrants are non-transferable, page 26

7. Please revise to clarify how the non-transferability of the Series B Warrants will affect the value of the Units.

Use of Proceeds, page 30

8. We note your response to prior comment 16. Please expand to describe what you believe will be the "most probable path" for your human clinical trial including disclosing the assumptions you are relying on to estimate the $2,300,000 for a human clinical trial. For example, how many patient counts do you anticipate will be required?

Management's Discussion and Analysis, page 34

9. We note your response to prior comment 18 and your description of the 5 phases. We note exhibit 10.6 that you identify as your agreement with Devicix does not appear to be the agreement you are describing in your disclosure. Also, it does not appear that the agreement filed as exhibit 10.9 includes the level of detail you describe in your registration statement, nor does exhibit 10.9 appear to be executed by either party. Please revise or advise.

Our Product, page 48

10. We note your revisions to the table in response to our comment 21. Please tell us how the "Medovex focus group panel" determined that the procedure using your product will only cost $2,010.

Note 5 – Patent Assignment and Contribution and Royalty Agreements, page F-12

11. We note your responses to our prior comments 23-24. We also note from your responses you believe that the patented technology received by the company from Dr. Haufe, a founding stockholder who owned 22% of your outstanding common stock at the date of inception of the entity, should be accounted for at fair value under FASB ASC 845-10-30-1 rather than at Dr. Haufe's historical cost under the guidance in SAB Topic 5(G). In this regard, please address the following:
    - tell us exactly what Dr. Haufe received in exchange for his Debride technology and how you determined that Dr. Haufe did not receive any consideration in exchange for his patented technology. Please provide us with references to the sections of the "Contribution and Royalty Agreement between MEDOVEX and Scott W. Haufe, dated January 31, 2013" that specifically indicate the consideration exchanged between Dr. Haufe and the company under the agreement;
    - tell us why you believe Dr. Haufe's contribution of his technology is not an exchange of an asset for common stock but is a non-reciprocal transfer of a separately identifiable non-monetary asset to you for no consideration that should be recorded at the fair value given the disclosures on page 66 of this filing that "on January 31, 2013 you entered into an agreement with Dr. Haufe, a director of the company, whereby you acquired all of Dr. Haufe's right, title and ownership of U.S. Patent 8,167,879 B2, together with all of Dr. Haufe's right, title and interest in and to the Debride intellectual property in exchange for shares of common stock of the company". You further disclose Dr. Haufe shall receive a royalty of 1% of your net sales during the life of the patent;
    - tell us the ownership percentages of the other 19 investors in the initial group of stockholders immediately after the February 1, 2013 capitalization of the company and
    - explain to us why Dr. Haufe has a seat on your board of directors. Also, tell us how you considered whether or not his board seat and right to receive future royalty payments were consideration for the technology contribution.

12. Notwithstanding the comment issued above, please explain to us in more detail how you determined the fair value of the patent. Specifically address how you determined the underlying assumptions used in recording the fair value of the patented technology. For instance, please explain to us why you utilized a 2% royalty rate versus the 1% stated within the agreement. Discuss why you utilized an annual revenue growth ranging from 310% in the initial period following commercialization of the technology to 3% over an

estimated economic life of the technology of 15 years commencing in 2015. Tell us whether you relied upon any third-party valuation experts to value the patent.

13. Considering your cumulative losses that you have incurred since inception through March 31, 2014, please explain to us in more detail how you evaluated this asset for impairment as of March 31, 2014. Refer to the guidance in FASB ASC 350-30-35-15 through 35-20**.**

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 http://www.sec.gov/divisions/corpfin/cfannouncements/drsfilingprocedures101512.htm.

Please keep in mind that we may publicly post filing review correspondence in accordance with our December 1, 2011 policy (http://www.sec.gov/divisions/corpfin/cfannouncements/edgarcorrespondence.htm). If you intend to use Rule 83 (17 CFR 200.83) to request confidential treatment of information in the correspondence you submit on EDGAR, please properly mark that information in each of your confidential submissions to us so we do not repeat or refer to that information in our comment letters to you.

You may contact Tara Harkins at 202-551-3639 or Brian Cascio at 202-551-3676 if you have questions regarding comments on the financial statements and related matters. Please contact Jay Mumford at 202-551-3637 or me at 202-551-3528 with any other questions.

Sincerely,

/s/ Amanda Ravitz

Amanda Ravitz
Assistant Director

cc: via Email Harvey Kesner, Esq.
Arthur S. Marcus, Esq.