



October 5, 2010

Via: EDGAR

Mr. Russell Mancuso  
Branch Chief  
Division of Corporation Finance  
United States Securities and Exchange Commission

Washington, DC 20549

Re: Response to Comments on Form 10-K for fiscal year ended December 31, 2009

Dear Mr. Mancuso:

On behalf of OPKO Health, Inc., we submit this letter in response to your comments of September 30, 2010, on our Form 10-K for the fiscal year ended December 31, 2009 ("Form 10-K"). For convenience, we have included your comments in italics before each of the responses. References in our responses to "we", "our", "us", or the "Company" mean OPKO Health, Inc. and its subsidiaries.

*Item 1, Business*

*Pharmaceutical Business, Page 8*

- 1. In your applicable future filings, please provide more detailed disclosure regarding the products currently being sold by Pharma Genexx and Pharmacos Exakta. Indicate in your disclosure if those products are proprietary or if you are reselling products made by third parties.*

**Response**

We will ensure in future filings that we provide more detailed disclosure regarding the products being sold by Pharma Genexx and Pharmacos Exakta, and indicate whether those products are proprietary or if we are reselling products made by third parties.

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*Item 1A, Risk Factors*

*Risks Related to Ownership of our Common Stock, Page 38*

2. *We note that you currently have outstanding shares of Series A and Series D preferred stock and 29 million warrants. Please add a risk factor in your applicable future filings that addresses the dilution to your common stockholders if the preferred stock is converted into shares of common stock and if the warrants are exercised. Indicate the number of shares of common stock into which the preferred stock can be converted and the number of shares issuable upon exercise of the warrants as of the latest practicable date. Please also indicate that the preferred shares are entitled to liquidation preferences and quantify such amounts as of the latest practicable date.*

**Response**

We will modify our disclosures in future filings to add a risk factor that addresses the dilution to our common stockholders if shares of our preferred stock are converted into shares of common stock and if the outstanding warrants are exercised. We will indicate in the risk factor disclosure the number of shares of common stock into which the preferred stock can be converted and the number of shares issuable upon exercise of the warrants as of the latest practicable date. We will also indicate in such disclosures that the preferred shares are entitled to liquidation preferences and quantify such amounts as of the latest practicable date.

*Part III, Page 85*

3. *We note your discussion of the \$12 million line of credit with the Frost Group on page 15 of the proxy statement that you have incorporated by reference. In your applicable future filings, please include disclosure of the largest aggregate amount of principal outstanding during the period for which disclosure is provided, the amount thereof outstanding as of the latest practicable date, the amount of principal paid during the period for which disclosure is provided and the amount of interest paid during the period for which disclosure is provided. Refer to Item 404(a)(5) of Regulation S-K.*

**Response**

We will ensure in applicable future filings that we include a disclosure of the largest aggregate amount of principal outstanding under the line of credit during the period for which disclosure is provided, the amount outstanding as of the latest practicable date and the amount of principal and interest paid during the period for which disclosure is provided. Please note that the line of credit is scheduled to terminate on January 11, 2011.

4. *We refer to your disclosure under "Our Policies Regarding Related Party Transactions" on page 17 of the proxy statement that you have incorporated by reference. In your applicable future filings, please disclose the standards to be applied in deciding whether to approve or ratify any related party transaction. Refer to Item 404(b)(1)(ii) of Regulation S-K.*

**Response**

We will ensure in applicable future filings that we disclose the standards to be applied under our policies in deciding whether to approve or ratify any related party transaction.

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5. *We refer to your disclosure under the caption "Equity Compensation" on page 21 of the proxy statement that you have incorporated by reference. We note minimal, if any discussion and analysis as to how the stock option grants were determined. In your applicable future filings, please include substantive analysis and insight into how your Compensation Committee made its stock option grant determinations with respect to each named executive officer. Refer to subparagraphs (b)(1)(iii) and (v) of Item 402 of Regulation S-K. For example, please discuss and analyze how the Compensation Committee determined the actual number of shares underlying the stock options that were awarded to your named executive officers and how and why those awards varied among the named executive officers.*

**Response**

We will ensure in applicable future filings that we include substantive analysis and insight into how our Compensation Committee made its stock option grant determinations with respect to each named executive officer.

6. *We note your disclosure under "Employment Agreements and Change in Control Arrangements" on page 26 of the proxy statement that you have incorporated by reference into your Form 10-K. In future filings, please disclose the information required by Item 402(j) of Regulation S-K. For example, please describe and explain the specific circumstances that would trigger accelerated vesting of securities issued under the 2007 Equity Incentive Plan and provide quantitative disclosure regarding estimated payments and benefits that would be provided in each circumstance, applying the assumptions that the triggering event took place on the last business day of your last completed fiscal year.*

**Response**

We will ensure in applicable future filings that we disclose the information required by Item 402(j) of Regulation S-K.

*Item 15. Exhibits, Financial Statements Schedules, Page 86*

7. *Please resolve any outstanding comments on your pending request for confidential treatment relating to Exhibit 10.25.*

**Response**

The Company initially sought confidential treatment of the asset purchase agreement dated October 12, 2009 between the Schering Corporation and the Company on March 12, 2010. Since such date, we have been engaged in ongoing dialog with the SEC regarding various aspects of our confidential treatment request. We received our latest correspondence from the SEC on October 1, 2010 and anticipate responding this week. We will keep you informed of our progress in resolving the matter.

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Mr. Russell Mancuso, Branch Chief  
United States Securities and Exchange Commission  
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Page 4

**General**

In connection with the Staff's comments, we acknowledge that:

- the Company is responsible for the adequacy and accuracy of the disclosure in the filing;
- Staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the Company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Yours truly,

/s/ Rao Uppaluri

Rao Uppaluri  
Senior Vice President and Chief Financial Officer

cc: Tim Buchmiller  
Allicia Lam