



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

DIVISION OF
CORPORATION FINANCE

September 15, 2010

William A. Carter, M.D.
Chief Executive Officer
Hemispherx Biopharma, Inc.
1617 JFK Boulevard
Philadelphia, PA 19103

Re: Hemispherx Biopharma, Inc.
Form 10-K for the year ended December 31, 2009
Form 10-K/A for the year ended December 31, 2009
File No. 1-13441

Dear Mr. Carter:

We have reviewed your filings and have the following comments. In some of our comments, we may ask you to provide us with information so may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information or by advising us when you will provide the requested response. If you do not believe a comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response. Please furnish us a letter on EDGAR under the form type label CORRESP that keys your response to our comment.

After reviewing your response, we may have additional comments.

Form 10-K for the fiscal year ended December 31, 2009

Item 1. Business, page 1

General

1. We note your discussion throughout the Business section of various agreements with third parties and the agreements listed in the exhibit index to the filing. Please provide draft disclosure to be included in an amended Form 10-K clarifying which agreements are considered material to the company and to further describe all material terms of each, including the financial obligations of each party and the duration and termination provisions. To the extent you have listed agreements in the exhibit index but have not described them in the filing, please advise us as to your reasoning, or, alternatively, provide a discussion of the material terms in the Business section of the filing. To the extent any agreements listed in the exhibit index are no longer in effect or have been terminated, please consider removing them from the list.

Our Products, page 2

2. Please provide draft disclosure to be included in an amended Form 10-K to disclose the following information for each of your major research and development projects:
 - The costs incurred during each period presented and to date on the project;
 - The nature, timing and estimated costs of the efforts necessary to complete the project;
 - The anticipated completion dates;
 - The risks and uncertainties associated with completing development on schedule, and the consequences to operations, financial position and liquidity if the project is not completed timely; and finally
 - The period in which material net cash inflows from significant projects are expected to commence.

If you do not maintain any research and development costs by project, disclose that fact and explain why management does not maintain and evaluate research and development costs by project. Provide other quantitative or qualitative disclosure that indicates the amount of the company's resources being used on the project.

Please disclose the amount or range of estimated costs and timing to complete the phase in process and each future phase. To the extent that information is not estimable, disclose those facts and circumstances indicating the uncertainties that preclude you from making a reasonable estimate.

Item 10. Directors and Executive Officers and Corporate Governance, page 48

3. Please provide draft disclosure to be included in an amended Form 10-K discussing the specific experience, qualifications, attributes or skills that led to the conclusion that each director should serve on the board of the company, as required by newly revised Item 401(e)(1) of Regulation S-K. Please note that the present disclosure of each individual's business experience alone is not sufficient to comply with this requirement.

Audit Committee and Audit Committee Expert, page 51

4. Please provide draft disclosure to be included in an amended Form 10-K clearly explaining why you do not have an audit committee financial expert, as required by Item 407(d)(5)(i)(C) of Regulation S-K.

Consolidated Financial Statements

(17) Fair value, page F-33

5. You determined that warrants with cash settlement features were liabilities. However, you assumed that the fair value of the warrants was zero based on a model which determines the probability that the cash settlement feature condition will arise. Please tell us why it is appropriate to assign no value to the warrants under each scenario that you considered in determining the fair value of the warrants. Please cite us for the authoritative accounting literature that you relied upon to value the warrants under each scenario.

Form 10-K/A filed April 30, 2010

General

6. We note that you have not included any disclosure in response to Item 402(s) of Regulation S-K. Please describe the process you undertook to reach this conclusion and present your analysis supporting the conclusion that such disclosure was not necessary.

Compensation Discussion and Analysis

Annual Bonus, page 5

7. Please provide draft disclosure to be included in an amended Form 10-K which discusses the following information:
 - The “corporate, department and individual performance goals,” referenced on pages 5 and 6, applicable to each named executive officer and used to determine annual bonuses for the 2009 fiscal year.
 - How each goal was weighted, if applicable. To the extent that any of the performance goals were quantitative, your disclosure should also be quantitative.
 - The threshold, target, and maximum levels of achievement of each performance goal, if applicable.
 - The intended relationship between the level of achievement of corporate and individual performance goals and the amount of bonus to be awarded.
 - The evaluation by the Committee of the level of achievement by each named executive officer of the corporate and individual performance goals applicable to them individually.
 - How this level of achievement translated into the actual bonuses awarded for the 2009 fiscal year.
 - The percentage of base salary awarded in the form of an incentive bonus to each named executive officer as a result of the company’s performance. To the extent

factors other than the corporate goals were considered, please disclose these factors.

Summary Compensation Table, page 12

8. Please revise your Summary Compensation Table to comply with newly revised Item 402(c)(2)(v) and (vi) of Regulation S-K.

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 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.

In responding to our comments, please provide a written statement from the company acknowledging 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.

You may contact Sasha Parikh, Staff Accountant, at (202) 551-3627 or Gus Rodriguez, Accounting Branch Chief, at (202) 551-3752 if you have questions regarding the processing of your response as well as any questions regarding comments on the financial statements and related matters. Please contact Laura Crotty, Staff Attorney, at (202) 551-3563 with questions on any of the other comments. In this regard, do not hesitate to contact me at (202) 551-3679.

Sincerely,

Jim B. Rosenberg
Senior Assistant Chief Accountant