



DIVISION OF
CORPORATION FINANCE

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

November 4, 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 October 8, 2010 response to our September 15, 2010 letter and have the following comments.

Please respond to this letter within ten business days by providing the requested information or by advising us when you will provide this information. Please furnish us a letter on EDGAR under the form type label CORRESP that keys your responses to our comments.

After reviewing the information provided, we may raise additional comments and/or request that you amend your filing.

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

Item 1. Business

Our Products, page 2

1. We acknowledge your response to prior comment 2. Please disclose the costs incurred to date related to Ampligen. You also indicated that you are in process of undergoing the tests needed for the validation phase to address the issues identified in the CRL. Since you are aware of what needs to be done to comply with the FDA requirements, it appears that costs could be estimated or a range of estimated costs could be determined. Please revise your proposed disclosure to indicate the nature, timing and estimated costs of the efforts necessary to complete the Ampligen project and the anticipated completion dates or the reason that an estimate cannot be made.

(17) Fair value, page F-33

2. We acknowledge your response to prior comment 5. You stated that the probability-adjusted Black-Scholes value of your warrants is zero. Please tell us the assumed probability of an event taking place that would cause cash settlement. Please also tell us the various factors considered that decreased the likelihood of a Fundamental Transaction occurring that would require cash settlement. Please provide us with your analysis that supports the probability of each of these factors to be zero and that the value of the warrants is zero for each scenario considered, including scenarios that do not require cash settlement.

Form 10-K/A filed April 30, 2010

Summary Compensation Table, page 12

3. We note your response to our prior comment 8. It appears that the figures in the 2008 Stock Awards and Option Awards columns of the Summary Compensation Table on page A-41 of your response letter have not changed from the disclosure included in your Form 10-K for the fiscal year ended December 31, 2008. Please confirm that the all figures appearing on page A-41 of your response were calculated in accordance with FASB ASC 718.

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