HEMISPHERX BIOPHARMA IN	(
Form S-8 POS	
July 27, 2012	

	As	filed	with	the	Se	curities	and	Exchange	Commis	ssion	on J	luly	27,	2012
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Registration No. 333-160499

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

POST-EFFECTIVE AMENDMENT NO. 2 TO

FORM S-8

REGISTRATION STATEMENT

Under the Securities Act of 1933

HEMISPHERX BIOPHARMA, INC.

(Exact name of registrant as specified in its charter)

Delaware 52-0845822 (State or jurisdiction of (I.R.S. Employer

incorporation or organization) Identification Number)

1617 JFK Boulevard

Philadelphia, Pennsylvania 19103

(215) 988-0080

(Address of Principal Executive Offices)(Zip Code)

HEMISPHERX BIOPHARMA, INC. 2009 EQUITY INCENTIVE PLAN

(full title of the plan)

1617 JFK Boulevard
Philadelphia, Pennsylvania 19103
(215) 988-0080
(Name, Address & Telephone number, including area code, of agent for service)
Copies to:
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Silverman Sclar Shin & Byrne PLLC
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Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer or a smaller reporting company. See definition of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. (Check one):

Large accelerated filer " Accelerated filer " Non-accelerated filer " Smaller Reporting Company x

William A. Carter, M.D., Chief Executive Officer

Hemispherx Biopharma, Inc.

Pursuant to Rule 429 under the Securities Act of 1933, as amended, the prospectus included in this Registration Statement also relates to the remaining unsold shares which were previously registered by the Registrant on Form S-8 under Registration Statement Nos. 333-57134, 333-118903 and 333-155528.

EXPLANATORY NOTE

This Post-Effective Amendment No. 2 to our Registration Statement on Form S-8 (File No. 333-160499) is being filed in order to update information related to the resale of 14,101,930 shares of our common stock, par value \$0.001, which have been issued or are issuable under the Hemispherx Biopharma, Inc. 2009 Equity Incentive Plan, the Hemispherx Biopharma, Inc. 2004 Equity Incentive Plan, the Hemispherx Biopharma, Inc. 2004 Equity Incentive Plan, the Hemispherx Biopharma, Inc. 1990 Amended And Restated Employee Stock Option Plan and our 2003 Directors' Compensation Plan to individuals who may be deemed to be "affiliates," as that term is defined in Rule 405 under the Securities Act of 1933, as amended (the "Securities Act"), of Hemispherx.

This Post-Effective Amendment No. 2 includes a reoffer prospectus, prepared in accordance with the requirements of Form S-3 which may be used for the offer and sale of the securities registered hereunder pursuant to General Instruction C of Form S-8.

Unless otherwise indicated, the terms "Hemispherx," the "Company," "we," "us," and "our" refer to Hemispherx Biopharma, Inc.

REOFFER PROSPECTUS

compensation under the Securities Act.

HEMISPHERX BIOPHARMA, INC.
14,101,930 Shares
COMMON STOCK
This prospectus relates to 14,101,930 shares of our common stock, par value \$0.001 per share, which we have issued or will issue upon exercise of outstanding options, warrants and incentive rights to certain of our officers, directors and employees. All of these shares have been issued or are issuable pursuant to the Hemispherx Biopharma, Inc. 2009 Equity Incentive Plan, the Hemispherx Biopharma, Inc. 2007 Equity Incentive Plan, the Hemispherx Biopharma, Inc. 1990 Amended And Restated Employee Stock Option Plan and our 2003 Directors' Compensation Plan (collectively, the "Plans"). From time to time, these individuals, who are named in this prospectus, may offer and sell the shares for their own accounts. We will not receive any proceeds from such sales. We will, however, receive proceeds from the exercise of options and warrants, if any.
The selling stockholders identified in this prospectus may be deemed to be "affiliates" as that term is defined under Rule 405 under the Securities Act.
The shares may be considered "control securities" and/or "restricted securities" under the Securities Act prior to their sale

Our common stock is traded on the NYSE MKT under the symbol "HEB." On July 26, 2012, the last reported sale price for our common stock on the NYSE MKT was \$0.34 per share.

under this reoffer prospectus. This reoffer prospectus has been prepared for the purpose of registering the shares to allow for future sales under the Securities Act by selling stockholders, on a continuous or delayed basis, to the public without restriction. The selling stockholders and participating brokers and dealers may be deemed to be "underwriters" within the meaning of the Securities Act in which event any profits on the sale of shares by those selling stockholders

and any commissions or discounts received by those brokers or dealers may be deemed to be underwriting

The selling stockholders may sell their shares from time to time on the NYSE MKT or otherwise, in one or more transactions at fixed prices, at prevailing market prices at the time of sale or at prices negotiated with purchasers. The selling stockholders will be responsible for any commissions or discounts due to brokers or dealers.

Please see the risk factors beginning on page 4 to read about certain factors you should consider before buying shares of common stock.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined that this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is July 27, 2012

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PROSPECTUS SUMMARY

The following is a brief summary of certain information contained elsewhere in this prospectus or incorporated in this prospectus by reference. This summary is not intended to be a complete description of the matters covered in this prospectus and is qualified in its entirety by reference to the more detailed information contained or incorporated by reference in this prospectus. You are urged to read this prospectus in its entirety, including all materials incorporated in this prospectus by reference.

The registration statement that contains this prospectus, including the exhibits to the registration statement, contains additional information about us and the securities being offered under this prospectus. You should read the registration statement and the accompanying exhibits for further information. The registration statement and exhibits can be read and are available to the public over the Internet at the SEC's website at http://www.sec.gov as described under the heading "Where You Can Find More Information."

We are a specialty pharmaceutical company based in Philadelphia, Pennsylvania and engaged in the clinical development of new drug therapies based on natural immune system enhancing technologies for the treatment of viral and immune based chronic disorders. We were founded in the early 1970s doing contract research for the National Institutes of Health. Since that time, we have established a strong foundation of laboratory, pre-clinical and clinical data with respect to the development of natural interferon and nucleic acids to enhance the natural antiviral defense system of the human body and to aid the development of therapeutic products for the treatment of certain chronic diseases.

Our current strategic focus is derived from four applications of our two core pharmaceutical technology platforms Ampligen® and Alferon N Injection®. The commercial focus for Ampligen® includes application as a treatment for Chronic Fatigue Syndrome ("CFS") and as a vaccine enhancer (adjuvant) for therapeutic and/or preventative development related to influenza and cancer treatments. Alferon N Injection® is a Food and Drug Administration ("FDA") approved product with an indication for refractory or recurring genital warts. Alferon® LDO (Low Dose Oral) is a formulation currently under development targeting influenza. We own and operate a 43,000 sq. ft. FDA approved facility in New Brunswick, NJ.

Our principal executive offices are located at One Penn Center, 1617 JFK Boulevard, Philadelphia, Pennsylvania 19103, and our telephone number is 215-988-0080. We maintain a website at "http://www.hemispherx.net." Information contained on our website is not considered to be a part of, nor incorporated by reference in, this prospectus Unless the context requires otherwise, references in this prospectus to "Hemispherx," the Company," "we," "us" and "our" refer to Hemispherx Biopharma, Inc.

RISK FACTORS

You should carefully consider the specific risks set forth under "Risk Factors" in the applicable prospectus supplement, under "Risk Factors" under Item 1A of Part I of our most recent annual report on Form 10-K, and under "Risk Factors" under Item 1A of Part II of our subsequent quarterly reports on Form 10-Q, as updated by our subsequent filings under the Securities Exchange Act of 1934, as amended, or the Exchange Act, each of which is incorporated by reference in this prospectus, before making an investment decision. For more information, see "Information Incorporated by Reference."

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

Any statements in this prospectus and the information incorporated herein by reference about our expectations, beliefs, plans, objectives, assumptions or future events or performance that are not historical facts are forward-looking statements. You can identify these forward-looking statements by the use of words or phrases such as "believe", "may", "could", "will", "estimate", "continue", "anticipate", "intend", "seek", "plan", "expect", "should", or "would". Among the fact cause actual results to differ materially from those indicated in the forward-looking statements are risks and uncertainties inherent in our business including, without limitation: the potential therapeutic effect of our products, the possibility of obtaining regulatory approval, our ability to manufacture and sell any products, our ability to enter into arrangements with third party vendors, market acceptance or our products, our ability to earn a profit from sales or licenses of any drugs, our ability to discover new drugs in the future, changing market conditions, changes in laws and regulations affecting our industry, issues related to the improvements and construction at of our New Brunswick, New Jersey facility; and other risks detailed in the documents incorporated by reference in this prospectus. If any of these risks or uncertainties materializes or any of these assumptions proves incorrect, our results could differ materially from the expectations in these statements. The forward-looking statements included in this prospectus are made only as of the date of this prospectus, and we are not under any obligation to update our respective forward-looking statements and do not intend to do so.

BUSINESS

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2011, incorporated by reference into this Prospectus, contains information about us, including audited financial statements for our fiscal year ended December 31, 2011. Please refer to this report and all of our subsequent reports filed with the SEC for additional information.

SELLING STOCKHOLDERS

This reoffer prospectus relates to shares that are being registered for reoffers and resales by the selling stockholders who have received or may receive shares pursuant to the Plans or upon exercise of options or warrants issued under the Plans. The selling stockholders may resell any or all of the shares offered from time to time while this reoffer prospectus is effective.

The following table sets forth (a) the name of each selling stockholder; (b) the number of shares of common stock of Hemispherx beneficially owned by each selling stockholder as of July 26, 2012; (c) the maximum number of shares of common stock of Hemispherx that each selling stockholder may offer for sale from time to time pursuant to this reoffer prospectus, whether or not the selling stockholder has any present intention to do so and whether or not such shares have previously been issued to the selling stockholder or may in the future be issued, if at all; and (d) the number of shares of common stock of Hemispherx and the percentage of common stock of Hemispherx that would be beneficially owned by each selling stockholder assuming the sale of all shares offered hereby. All information with respect to beneficial ownership has been furnished by the selling stockholders. The inclusion in the table below of the individuals named therein shall not be deemed to be an admission that any such individuals are our "affiliates" as that term is defined under Rule 405 under the Securities Act.

Information concerning the identities of the selling stockholders, the number of shares that may be sold by each selling stockholder and information about the shares beneficially owned by the selling stockholders may from time to time be updated in supplements to this reoffer prospectus, which will be filed with the SEC in accordance with Rule 424(b) of the Securities Act if and when necessary. Information on the shares offered pursuant to this reoffer prospectus, as listed below, do not necessarily indicate that the selling stockholder presently intends to sell any or all of the shares so listed. Because the selling stockholders may sell none, some or all of the shares owned by them which are included in this reoffer prospectus, no estimate can be given as to the number of shares available for resale hereby that will be held by the selling stockholders upon the termination of the offering made hereby. We have therefore assumed, for purposes of the following table, that the selling stockholders will sell all of the shares owned by them that are being offered hereby, but will not sell any other shares of our common stock that they presently own.

	Common Stock	Maximum	Common Stock	Percentage of
Selling Stockholder	Owned Prior	No. of Shares	Owned After	Shares Owned
	To Offering	Being Offered	The Offering	After Offering
William A. Carter (1) (2)	8,748,174	8,300,012	448,162	*
Richard C. Piani (3)	857,420	757,620	99,800	*
Charles T. Bernhardt (4)	377,420	375,420	2,000	*
Thomas K. Equels (5)	2,496,640	2,470,908	25,732	*
William M. Mitchell (6)	716,025	698,385	17,640	*
Iraj E. Kiani (7)	439,541	439,541	0	*
David Strayer (8)	477,681	376,432	101,249	*
Wayne Springate (9)	292,421	291,544	877	*
Robert Dickey (10)	202,500	200,000	2,500	*
Ralph C. Cavalli (11)	60,000	60,000	0	*
Adam Pascale (12)	132,068	132.068	0	*

^{*} Ownership of less than 1%

Dr. Carter is our Chairman of the Board, Chief Executive Officer, President and Chief Scientific Officer. Common (1)Stock owned Prior to the Offering and Common Stock being Offered include 442,423 shares and 7,856,574 shares upon exercise of:

	PLAN	EXERCISE PRICE	NUMBER OF SHARES	EXPIRATION DATE
<u>OPTIONS</u>				
	2004	\$ 2.60	167,000	09/07/14
	2004	\$ 2.60	153,000	12/07/14
	2004	\$ 1.75	100,000	04/26/15
	2004	\$ 1.86	465,000	06/30/15
	2004	\$ 2.61	10,000	12/08/15
	2004	\$ 2.87	70,000	12/09/15
	2004	\$ 2.38	300,000	01/01/16
	2004	\$ 3.78	376,650	02/22/16
	2004	\$ 2.00	1,000,000	09/09/17
	2004	\$ 3.50	1,400,000	09/30/17
	2004	\$ 4.00	190,000	02/18/18
	2007	\$ 2.20	1,450,000	09/17/18
	2009	\$ 0.66	500,000	06/11/20
	2009	\$ 2.71	73,728	12/22/20
	2009	\$ 0.41	500,000	07/15/21
	2009	\$ 4.03	10,000	04/13/22
	2009	\$ 0.29	100,000	06/06/22
	2009	\$ 0.31	500,000	06/11/22
Total Options			7,365,378	

WARRANTS

Total Warrants 2009 \$ 0.51 491,196 02/01/19

- (2) Common Stock owned prior to and after the offering includes 1,015 shares owned by Dr. Katalin Kovari. Dr. Kovari, our Associate Medical Director, is the spouse of Dr. Carter.
- (3) Mr. Piani is a member of our Board of Directors. Common Stock owned Prior to the Offering and Common Stock being Offered include 333,012 shares and 424,608 shares issuable upon exercise of:

		EXERCISE	NUMBER	EXPIRATION
	PLAN	PRICE	OF SHARES	DATE
OPTIONS				
	2004	\$ 2.60	54,608	09/07/14
	2004	\$ 1.75	100,000	04/26/15
	2004	\$ 3.86	50,000	02/24/16
	2004	\$ 2.00	100,000	09/09/17
	2004	\$ 4.00	20,000	02/18/18
	2009	\$ 0.29	100,000	06/06/22
Total Options			424,608	

(4) Mr. Bernhardt is our Chief Financial Officer. Common Stock owned Prior to the Offering and Common Stock being Offered include 175,420 shares and 200,000 shares issuable upon exercise of:

		EXERCISE	NUMBER	EXPIRATION
	PLAN	PRICE	OF SHARES	DATE
OPTIONS				
	2009	\$ 0.55	100,000	12/03/20
	2009	\$ 0.31	100,000	12/22/21
Total Options			200,000	

Mr. Equels is a member of our Executive Vice Chairman of the Board, Secretary and General Counsel. Common (5) Stock owned Prior to the Offering and Common Stock being Offered include 979,712 shares and 1,491,196 shares issuable upon exercise of:

	PLAN	EXERCISE PRICE	NUMBER OF SHARES	EXPIRATION DATE
OPTIONS				
	2009	\$ 0.66	300,000	06/11/20
	2009	\$ 0.41	300,000	06/24/21
	2009	\$ 0.29	100,000	06/06/22
	2009	\$ 0.31	300,000	06/11/22
Total Options			1,000,000	
WARRANTS				
Total Warrants	2009	\$ 0.51	491,196	02/01/19

(6) Dr. Mitchell is a member of our Board of Directors. Common Stock owned Prior to the Offering and Common Stock being Offered include 286,385 shares and 412,000 shares issuable upon exercise of:

		EXERCISE	NUMBER	EXPIRATION
	PLAN	PRICE	OF SHARES	DATE
OPTIONS				
	2004	\$ 2.60	50,000	09/07/14
	2004	\$ 1.75	100,000	04/26/15
	2004	\$ 3.86	50,000	02/24/16
	2004	\$ 2.00	100,000	09/09/17
	2004	\$ 6.00	12,000	09/17/18
	2009	\$ 0.29	100,000	06/06/22
Total Options			412,000	

⁽⁷⁾ Dr. Kiani is a member of our Board of Directors. Common Stock owned Prior to the Offering and Common Stock being Offered include 262,541 shares and 177,000 shares issuable upon exercise of:

EXERCISE