

Hemispherx Biopharma Inc.

PROXY CARD

HEMISPHERX BIOPHARMA, INC. ANNUAL MEETING OF STOCKHOLDERS JUNE 24, 2009

THIS PROXY IS SOLICITED ON BEHALF OF THE BOARD OF DIRECTORS

The undersigned hereby appoints William A. Carter and Thomas K. Equals and each of them, with full power of substitution, as proxies to represent the undersigned at the Annual Meeting of Stockholders to be held at the Embassy Suites Hotel, 1776 Benjamin Franklin Parkway, Philadelphia, Pennsylvania 19103, on Wednesday, June 24, 2009, at 10:00 a.m. local time and at any adjournment thereof, and to vote all of the shares of common stock of Hemispherx Biopharma, Inc. the undersigned would be entitled to vote if personally present, upon the following matters:

THE SHARES REPRESENTED BY THIS PROXY WILL BE VOTED AS DIRECTED. THE BOARD RECOMMENDS A VOTE "FOR" ALL DIRECTORS AND "FOR" ITEMS NOS. 2, 3 AND 4. IF NO CONTRARY INSTRUCTION IS GIVEN, THE SHARES WILL BE VOTED FOR THE ELECTION OF WILLIAM A. CARTER, RICHARD C. PIANI, THOMAS K. EQUELS, WILLIAM A. MITCHELL AND IRAJ EQHBAL KIANI AS DIRECTORS, FOR PROPOSALS NOS. 2, 3 AND 4 AND, IN THE DISCRETION OF THE PROXIES, ON ALL OTHER MATTERS PROPERLY BROUGHT BEFORE THE ANNUAL MEETING.

SIGN, DATE AND RETURN PROXY CARD PROMPTLY

▼ FOLD AND DETACH HERE AND READ THE REVERSE SIDE ▼

THE BOARD OF DIRECTORS RECOMMENDS A VOTE "FOR" PROPOSALS 1, 2, 3 AND 4.

PROXY

Please mark
your votes
like this



1. Proposal No. 1 – Election of Directors.

NOMINEES: (01) William A. Carter
(02) Richard C. Piani
(03) Thomas K. Equals
(04) William M. Mitchell
(05) Iraj-Eqhbali Kiani

FOR all
Nominees listed
to the left
(except as marked to
the contrary)

WITHHOLD AUTHORITY
to vote for all nominees listed to
the left

(Instruction: To withhold authority to vote for any individual nominee, strike a line through that nominee's name in the list above)

2. Proposal No. 2 – Ratification of the selection of McGladrey & Pullen, LLP, as independent auditors of Hemispherx Biopharma, Inc. for the year ending December 31, 2009.

FOR	AGAINST	ABSTAIN
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Proposal No. 3 – To amend Hemispherx's certificate of incorporation to increase the number of authorized shares of Hemispherx common stock from 200,000,000 to 350,000,000.

FOR	AGAINST	ABSTAIN
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

4. Proposal No. 4 – To adopt the Hemispherx 2009 Incentive Plan.

FOR	AGAINST	ABSTAIN
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

In their discretion, the proxies are authorized to vote upon such other business as may properly come before the meeting.

COMPANY ID:

PROXY NUMBER:

ACCOUNT NUMBER:

Signature _____ Signature _____ Date _____, 2009

Note: Please sign exactly as name appears hereon. When shares are held by joint owners, both should sign. When signing as attorney, executor, administrator, trustee, guardian, or corporate officer, please give title as such.