



FOR IMMEDIATE RELEASE

BIOSPHERE MEDICAL REPORTS 2008 FIRST QUARTER FINANCIAL RESULTS

Q1 2008 Highlights

- Record total revenue up 10% to \$7.21 million from \$6.58 million in Q1 2007
- U.S. UFE sales rose 11% to \$3.91 million from \$3.53 million in Q1 2007
- Gross margin increased to 72% of sales from 68% in Q1 2007
- Commercial launch of Embosphere® Microspheres in China
- Five out of six U.S. expansion territories filled

ROCKLAND, Mass. – April 23, 2008 – BioSphere Medical, Inc. (NASDAQ: BSMD) (“BioSphere”), a medical device company that has pioneered the use of bioengineered microspheres to treat uterine fibroids, hypervascularized tumors, and vascular malformations by a minimally invasive, image-guided medical procedure called embolotherapy, today reported that total revenue for the first quarter of 2008 increased 10% to \$7.21 million from total revenue of \$6.58 million for the first quarter of 2007. In the first quarter of 2008, revenue in the U.S. was \$5.06 million, an increase of 10% compared to revenue of \$4.60 million in the first quarter of 2007. Revenue in Europe, Mid-East and Africa (EMEA) rose 2% to \$1.78 million for the first quarter of 2008 from \$1.76 million for the same period in 2007. In markets outside of the United States and EMEA, revenue in Rest of World (ROW) markets increased 63% to \$0.37 million for the first quarter of 2008 from \$0.22 million for the same period in 2007.

Gross margin rose to \$5.17 million, or 72% of revenue, for the first quarter of 2008, compared to gross margin of \$4.49 million, or 68% of revenue, for the first quarter of 2007.

Operating expense for the first quarter of 2008 was \$6.53 million compared to \$5.76 million for the first quarter of 2007, an increase of 13%. The primary reasons for the year-over-year increase in operating expense were an increase in headcount for the Company’s U.S. field sales force, from 19 to 26, patent expenses related to the Company’s drug delivery embolic platform, and start-up costs for the commercial launch of Embosphere Microspheres in the People’s Republic of China.

Operating loss for the first quarter of 2008 was \$1.35 million compared to \$1.27 million for the first quarter of 2007, an increase of 7%.

Other expense in Q1 2008 was \$0.05 million compared to other income of \$0.23 million in Q1 2007, an expense increase of \$0.28 million. The expense increase was due to the significant strengthening of the euro against the U.S. dollar, which impacted the Company’s euro-denominated intercompany payable to its French affiliate, and lower interest rates on invested cash.

Net loss applicable to common stockholders for the first quarter of 2008 was \$1.55 million, or \$0.09 per basic and diluted share, compared to a net loss applicable to common stockholders of \$1.17 million, or \$0.07 per basic and diluted share, in the same period last year.

At March 31, 2008, BioSphere had cash, cash equivalents and marketable securities of \$20.7 million. The primary uses of cash for the quarter were payment of an annual royalty for Embosphere Microspheres and year-end incentive payments to employees.

Richard Faleschini, BioSphere Medical's president and chief executive officer, said, "This quarter, we continued to execute on the previously announced strategies that we have been directing to our four key U.S. UFE constituencies—interventional radiologists, hospitals, gynecologists, and women with symptomatic fibroids—and we believe our strategies have gained further traction with these constituencies. Indications are that many interventional radiologists are working with us to expand their UFE practice; service line and hospital administrators are responding very favorably to our presentations showing UFE's compelling clinical and economic value propositions; gynecologists are becoming better informed about UFE, and, in an increasing number of cases, we believe are better informing their patients; and, women with symptomatic fibroids continue to seek information about treatment alternatives, particularly less invasive treatments. The expansion of our U.S. sales organization is nearly complete, and when fully up to speed is expected to be a means for us to more effectively execute our initiatives. Outside the U.S., we began the commercial launch of Embosphere Microspheres to the People's Republic of China during this quarter. We view China as a potentially significant contributor to future operating results. Our results this quarter showed the progress we have been anticipating, and we look forward to progressively stronger results as we proceed through the year."

Significant highlights, activities and developments in the first quarter of 2008 and subsequent weeks included:

- First quarter 2008 worldwide sales of embolics used in interventional gynecology, or UFE, rose 10% to \$4.86 million compared to the first quarter of 2007, which was comprised of U.S. sales of \$3.91 million, an increase of 11%, and sales outside of the U.S. of \$0.95 million, an increase of 9%.
- First quarter 2008 worldwide sales of embolics used in interventional oncology rose 15% to \$1.35 million compared to the first quarter of 2007, which was comprised of U.S. sales of \$0.89 million, an increase of 5%, and sales outside of the U.S. of \$0.46 million, an increase of 40%.
- First quarter 2008 worldwide sales of delivery systems rose 22% to \$0.32 million compared to the first quarter of 2007, which was comprised of U.S. sales of \$0.15 million, an increase of 37%, and sales outside of the U.S. of \$0.17 million, an increase of 12%.
- The commercial launch in March 2008 of BioSphere's Embosphere Microspheres in the People's Republic of China. This follows the January 2008 approval by the Medical Device Department of the State Food and Drug Administration of the PRC of Embosphere Microspheres for clinical use for vascular embolizations, arteriovenous malformations, hypervascularized tumors and symptomatic uterine fibroids.
- A satellite symposium, podium presentations, and key abstracts related to BioSphere's embolic products for the treatment of symptomatic uterine fibroids, liver cancer and arteriovenous malformations were presented at the Society of Interventional Radiology (SIR) 33rd Annual Scientific Meeting held March 15-20, 2008 in Washington, D.C.

- BioSphere funded a supplement in the April 2008 issue of *Contemporary OB/GYN* (circulation of approximately 40,000) entitled "Expert Exchange: How to Formulate the Relationship Between the Ob/Gyn and the Interventional Radiologist for the Treatment of Uterine Fibroids." This supplement highlights the clinical benefits that can result when ob/gyns and interventional radiologists work in collaboration to treat women suffering with symptomatic uterine fibroids. It also details the mutually beneficial collaborative experiences of John H. Fischer II, M.D., Assistant Professor of Radiology, St. Luke's Episcopal Hospital, Baylor College of Medicine, and Robert K. Zurawin, M.D., Associate Professor of Obstetrics and Gynecology, Baylor College of Medicine. Dr. Fischer and Dr. Zurawin agreed that their collaboration has allowed them to "see many more patients than if we were not working with each other. By combining our resources and our expertise, we have a unique relationship that enables us to evaluate, treat, and help women with fibroids, regardless from whose practice they originate."
- On March 5, 2008, CBS's *The Early Show* featured a segment titled "Too Many Hysterectomies." Rebecca Brightman, M.D., an ob/gyn from Mt. Sinai Medical Center, indicated that studies suggest that as many as 2/3 of hysterectomies may not be necessary. The segment featured three alternatives: hormones, endometrial ablation, and UFE. Dr. Brightman indicated that UFE is a "great new procedure" if fibroids is the underlying cause for excessive menstrual bleeding.
- The appointment of Willard W. Hennemann, Ph.D. as vice president of new products and business development.

Conference Call and Webcast with Slide Presentation

The Company will host its quarterly conference call on April 24, 2008 at 8:30 a.m. Eastern Time. The number to dial is 888-563-6275 (US/Canada) or 706-643-3137 (International), and the conference ID is 43229137. Please call in approximately ten minutes before the call is scheduled to begin. The live webcast with integrated slide presentation, as well as a stand-alone copy of the slide presentation, will be available in the "Investors" section of BioSphere's Web site at www.biospheremed.com. A replay of the webcast will also be available at BioSphere's Web site.

About BioSphere Medical, Inc.

BioSphere Medical, Inc., a medical device company based in Rockland, Massachusetts, seeks to pioneer and commercialize minimally invasive diagnostic and therapeutic applications based on proprietary bioengineered microsphere technology. The Company's core technologies, patented bioengineered polymers and manufacturing methods, are used to produce microscopic spherical materials with unique beneficial properties for a variety of medical applications. BioSphere's principal focus is the treatment of symptomatic uterine fibroids using a procedure called uterine fibroid embolization, or UFE. The Company's products continue to gain acceptance in this rapidly emerging procedure, as well as in a number of other new and established medical treatments.

Cautionary Note Regarding Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, including, without limitation, statements regarding the Company's expectation for stronger results in the remainder of 2008, the Company's ability to successfully execute on its business strategies and initiatives, the potential for sales of the Company's Embosphere Microspheres in China to significantly contribute to future operating results, and the expected benefits of the sales force expansion. The Company may use words such as "plans," "seeks," "projects," "believes," "may," "anticipates," "estimates," "should," "intends," "looking forward," and similar expressions to identify these forward-looking statements. These statements are subject to

risks and uncertainties and are based upon the Company's beliefs and assumptions. There are a number of important factors that may affect the Company's actual performance and results and the accuracy of its forward-looking statements, many of which are beyond the Company's control and are difficult to predict. These important factors include, without limitation, risks relating to:

- the failure of the Company to achieve or maintain necessary regulatory approvals, either in the United States or internationally, with respect to the manufacture and sale of its products and product candidates;
- the failure of the Company to successfully develop, commercialize and achieve widespread market acceptance of its products, including, without limitation, widespread market acceptance of its lead product, Embosphere Microspheres, for the treatment of UFE, its HepaSphere™ Microsphere and QuadraSphere® Microsphere products, and its delivery system product line;
- the failure of the Company to increase the rate of UFE procedures, and concomitant use of its products for UFE, with its expanded sales force;
- the Company's ability to obtain and maintain patent and other proprietary protection for its products and product candidates;
- the absence of, or delays or cancellations of, product orders;
- delays, difficulties or unanticipated costs in the introduction of new products;
- competitive pressures and the risk of product liability claims, either of which may impact market acceptance of products and adversely affect the Company's operating results;
- the inability of the Company to successfully execute on its plans and strategies for future growth;
- the inability of the Company to raise additional funds in the near term to finance the development, marketing, and sales of its products;
- general economic and market conditions; and
- risk factors described in the section titled "Risk Factors" in the Company's Annual Report on Form 10-K for the year ended December 31, 2007, as filed by the Company with the Securities and Exchange Commission, and described in other filings made by the Company from time to time with the Securities and Exchange Commission.

In addition, the forward-looking statements included in this press release represent the Company's estimates as of the date of this release. The Company anticipates that subsequent events and developments may cause its forward-looking statements to change. The Company specifically disclaims any obligation or intention to update or revise these forward-looking statements as a result of changed events or circumstances after the date of this press release.

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-OR-

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BioSphere Medical, Inc.

SELECTED FINANCIAL INFORMATION

CONSOLIDATED CONDENSED BALANCE SHEETS

As of March 31, 2008 and December 31, 2007

(in thousands, unaudited)

	March 31, 2008	December 31, 2007
ASSETS		
Cash, cash equivalents and investments	\$ 20,704	\$ 23,579
Accounts receivable, net	4,582	4,097
Inventories	3,795	3,836
Prepaid expenses and other current assets	1,018	613
Property and equipment, net	1,180	1,124
Goodwill	1,443	1,443
Other assets	72	67
	<u>32,794</u>	<u>34,759</u>
Total assets	<u>\$ 32,794</u>	<u>\$ 34,759</u>
LIABILITIES AND STOCKHOLDERS' EQUITY		
Accounts payable and accrued expenses	\$ 4,291	\$ 5,460
Deferred revenue	125	146
Capital lease obligations	23	44
Stockholders' equity	28,355	29,109
	<u>28,355</u>	<u>29,109</u>
Total liabilities and stockholders' equity	<u>\$ 32,794</u>	<u>\$ 34,759</u>

CONSOLIDATED CONDENSED STATEMENTS OF OPERATIONS
For the three months ended March 31, 2008 and 2007
(in thousands, except per share amounts, unaudited)

	Three Months Ended	
	March 31,	
	2008	2007
Revenues	\$ 7,214	\$ 6,585
Costs and expenses:		
Cost of revenues	2,043	2,095
Research and development	647	661
Sales	2,652	2,048
Marketing	1,323	1,392
General, administrative and patent costs	1,903	1,656
	<u>8,568</u>	<u>7,852</u>
Total costs and expenses		
Loss from operations	(1,354)	(1,267)
Other income and expenses, net	(47)	231
	<u>(1,401)</u>	<u>(1,036)</u>
Net loss	(1,401)	(1,036)
Preferred stock dividends	(145)	(136)
	<u>(145)</u>	<u>(136)</u>
Net loss applicable to common stockholders	\$ (1,546)	\$ (1,172)
Net loss per common share		
Basic and diluted	<u><u>\$ (0.09)</u></u>	<u><u>\$ (0.07)</u></u>
Weighted average common shares outstanding		
Basic and diluted	<u><u>17,961</u></u>	<u><u>17,537</u></u>