
SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 8-K

CURRENT REPORT

Pursuant to Section 13 or 15(d) of The Securities Exchange Act of 1934

Date of Report (Date of earliest event reported) **August 16, 2004**

MACROPORE BIOSURGERY, INC.

(Exact name of registrant as specified in Charter)

Delaware
(State or Other Jurisdiction
of Incorporation)

000-32501
(Commission File
Number)

33-0827593
(IRS Employer
Identification No.)

6740 Top Gun Street, San Diego, California
(Address of Principal Executive Offices)

92121
(Zip Code)

Registrant's telephone number, including area code: **(858) 458-0900**

Item 7. Financial Statements and Exhibits

(c) Exhibits

Exhibit 99.1 Press release issued by MacroPore Biosurgery, Inc. on August 16, 2004, reported financial results for the quarter ended June 30, 2004.

Item 12. Results of Operation and Financial Condition

Press release issued by MacroPore Biosurgery, Inc. on August 16, 2004, reporting financial results for the quarter ended June 30, 2004. A copy of the press release is attached hereto as Exhibit 99.1.

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SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

MACROPORE BIOSURGERY, INC.

Dated: August 16, 2004

By: /s/ Christopher J. Calhoun

Christopher J. Calhoun
President and Chief Executive Officer

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EXHIBIT INDEX

Exhibit Number	Description of Document
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MacroPore Biosurgery Announces Second Quarter 2004 Financial Results

San Diego, CA, August 16, 2004 - MacroPore Biosurgery, Inc. (Frankfurt: XMP) today announced financial results for the quarter ended June 30, 2004.

Total revenues for the three months ended June 30, 2004 were \$1.5 million compared to \$2.9 million for the same period in 2003. In the second quarter of 2004, spine and orthopedic implants accounted for \$0.9 million in revenue, compared to \$2.0 million for the same period in 2003. Total revenues for the six months ended June 30, 2004 were \$3.9 million compared to \$4.8 million for the same period in 2003. In the first half of 2004, spine and orthopedic implants accounted for \$2.5 million in revenue, compared to \$3.0 million for the same period in 2003. Net loss for the three months ended June 30, 2004 was \$3.8 million compared to a net loss of \$2.1 million for the same period in 2003. Net loss for the six months ended June 30, 2004 was \$2.3 million, after a \$5.0 million gain related to the completion of the clinical research regarding Faster Resorbing Polymers, compared to \$5.3 million for the same period in 2003.

MacroPore Biosurgery ended the second quarter of 2004 with \$18.0 million in cash and cash equivalents and short term investments, which includes the \$7.0 million initial thin film product line sale payment received in May 2004 from MAST Biosurgery. Since the end of the quarter, MacroPore Biosurgery received \$1.5 million from Senko Medical Trading Co. (Senko) as a fee for distribution rights for thin films products in Japan. Additionally, MacroPore Biosurgery was awarded a grant for the second phase of its National Institutes of Health (NIH) Small Business Innovation Research study, which was announced to be worth up to \$750,000. Phase II of the reimbursement was subsequently increased by the NIH to \$850,000, subject to availability of funds and satisfactory progress. The funding from the NIH will be received during 2004 and 2005. In the second half of 2004, MacroPore Biosurgery expects to receive a \$1.25 million milestone from Senko for submitting a thin film regulatory application in Japan and a \$1.0 to \$2.0 million milestone payment from Medtronic Inc. related to the transfer of know-how in connection with the 2002 sale of the craniomaxillofacial product line.

“As previously disclosed, the time frame to achieve broad market adoption for our new class of spine and orthopedic products has been difficult to predict,” said Christopher J. Calhoun, Chief Executive Officer of MacroPore Biosurgery. “However, our commitment to this product line is demonstrated by the recent regulatory milestones, which include a CE Mark for the first minimally invasive resorbable lumbar interbody fusion device in Europe, a CE Mark for the first resorbable cervical interbody device in Europe, and an FDA Clearance for the first resorbable spinal plate and screw system with radiographic visualization properties. These clearances provide additional rationale for physician adoption of the HYDROSORB™ family of products. Simultaneously, we have continued to make progress within our regenerative cell technology program. Since the close of the quarter, we received notice of award of the second phase of our NIH grant to study the potential role of adipose-derived regenerative cells in treating heart attack and expect to release the results of two pre-clinical trials later this year.”

Conference call information

The management of MacroPore Biosurgery will host a conference call today at 4:30 pm Central Eastern Summer Time (CEST) or 10:30 am Eastern Daylight Time (EDT) to discuss the quarterly results. This conference call may be accessed from the investor relations section of the Company's website, www.macropore.com. An archived version of the webcast will be available on the same website 60 minutes after the call. The audio replay will be archived for 24 hours following the call and may be accessed by dialing +49 69 58 99 90 568 (PIN: 132681#) or (303) 590-3000 (PIN: 11005031#).

About MacroPore Biosurgery, Inc.

MacroPore Biosurgery (Frankfurt: XMP) is focused on the discovery, development and commercialization of regenerative medicine technologies. We have two technology platforms, bioresorbable technology and regenerative cell technology. Our surgical implants, derived from our bioresorbable technology, represent one of the latest advancements in spine and orthopedic medicine. They are manufactured by us and distributed exclusively through Medtronic Sofamor Danek. Within our regenerative cell technology program, we are developing a system to isolate autologous, homologous-use, regenerative cells. Simultaneously, we are generating scientific knowledge through internal research to support the clinical use of these cells. Our most advanced research and development program is in the repair of cardiovascular tissues that are damaged after a heart attack. We are also researching applications in bone repair, spinal disc regeneration, and cosmetic and reconstructive surgery. For further information please visit our web site <http://www.macropore.com>.

Cautionary Statement Regarding Forward-Looking Statements

This press release may include forward-looking statements regarding events and trends which may affect MacroPore Biosurgery's future operating results and financial position. Such statements are subject to risks and uncertainties that could cause MacroPore Biosurgery's actual results and financial position to differ materially. Some of these risks and uncertainties are described (under the heading "Risk Factors") in our 2003 Form 10-K annual report for the year ended December 31, 2003, which is available on our web site. MacroPore Biosurgery assumes no responsibility to update any revision of forward-looking statements to reflect events, trends or circumstances after the date they are made.

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MACROPORE
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MACROPORE BIOSURGERY, INC.
CONSOLIDATED CONDENSED BALANCE SHEETS

	As of June 30, 2004 (Unaudited)	As of December 31, 2003
Assets		
Current assets:		
Cash and cash equivalents	\$ 2,093,000	\$ 2,820,000
Short-term investments, available-for-sale	15,940,000	11,448,000
Accounts receivable, net of allowance for doubtful accounts of \$32,000 and \$62,000 in 2004 and 2003, respectively	1,457,000	1,291,000
Inventories	463,000	831,000
Other current assets	605,000	526,000
Total current assets	20,558,000	16,916,000
Property and equipment, net	3,554,000	3,822,000
Other assets	209,000	332,000
Intangibles, net	2,257,000	2,392,000
Goodwill	4,387,000	4,627,000
Total assets	\$ 30,965,000	\$ 28,089,000
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable and accrued expenses	\$ 2,427,000	\$ 3,767,000
Current portion of long-term obligations	886,000	717,000
Total current liabilities	3,313,000	4,484,000
Deferred gain on sale of assets, related party	7,383,000	7,539,000
Deferred gain on sale of assets	6,266,000	—
Deferred income	58,000	—
Long-term obligations, less current portion	1,328,000	1,157,000
Total liabilities	18,348,000	13,180,000
Stockholders' equity:		
Preferred stock, \$0.001 par value; 5,000,000 shares authorized; -0- shares issued and outstanding in 2004 and 2003	—	—
Common stock, \$0.001 par value; 95,000,000 shares authorized; 16,800,018 and 16,777,644 shares issued and 13,930,834 and 14,195,062 shares outstanding in 2004 and 2003, respectively	17,000	17,000
Additional paid-in capital	74,734,000	74,698,000
Unearned compensation	—	(109,000)
Accumulated deficit	(51,705,000)	(49,385,000)
Treasury stock, at cost	(10,405,000)	(9,362,000)
Treasury stock receivable	—	(976,000)
Accumulated other comprehensive income (loss)	(24,000)	26,000
Total stockholders' equity	12,617,000	14,909,000
Total liabilities and stockholders' equity	\$ 30,965,000	\$ 28,089,000

MACROPORE
BIOSURGERY
MACROPORE BIOSURGERY, INC.
CONSOLIDATED CONDENSED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME
(LOSS)
(UNAUDITED)

	For the Three Months Ended June 30,		For the Six Months Ended June 30,	
	2004	2003	2004	2003
Revenues:				
Sales to related party	\$ 894,000	\$ 2,585,000	\$ 2,815,000	\$ 4,191,000
Sales to third parties	636,000	318,000	977,000	641,000
Research grant	10,000	—	100,000	—

	1,540,000	2,903,000	3,892,000	4,832,000
Cost of revenues:				
Cost of revenues (including stock based compensation expense of \$1,000 and \$3,000 for the three months ended June 30, 2004 and 2003; \$3,000 and \$6,000 for the six months ended June 30, 2004 and 2003, respectively)	314,000	787,000	1,191,000	1,426,000
Inventory provision	—	—	242,000	—
Gross profit	1,226,000	2,116,000	2,459,000	3,406,000
Operating expenses:				
Research and development, excluding stock based compensation expense of \$32,000 and \$20,000 for the three months ended June 30, 2004 and 2003, respectively; \$32,000 and \$39,000 for the six months ended June 30, 2004 and 2003, respectively	2,668,000	2,107,000	5,175,000	4,258,000
Sales and marketing, excluding stock based compensation expense of \$11,000 and \$18,000 for the three months ended June 30, 2004 and 2003, respectively; \$22,000 and \$36,000 for the six months ended June 30, 2004 and 2003, respectively	654,000	1,004,000	1,612,000	2,299,000
General and administrative, excluding stock based compensation expense of \$36,000 and \$174,000 for the three months ended June 30, 2004 and 2003, respectively; \$71,000 and \$350,000 for the six months ended June 30, 2004 and 2003, respectively	1,575,000	951,000	2,801,000	1,999,000
Stock based compensation (excluding cost of revenues stock based compensation)	79,000	212,000	125,000	425,000
Restructuring charge	70,000	—	70,000	—
Total operating expenses	5,046,000	4,274,000	9,783,000	8,981,000
Other income (expense):				
Gain on the sale of assets, related party	—	—	5,000,000	—
Interest income	57,000	105,000	112,000	247,000
Interest and other (expenses), net	(47,000)	(6,000)	(108,000)	(11,000)
Net loss	(3,810,000)	(2,059,000)	(2,320,000)	(5,339,000)
Other comprehensive loss: unrealized holding loss	(41,000)	(11,000)	(50,000)	(52,000)
Comprehensive loss	\$ (3,851,000)	\$ (2,070,000)	\$ (2,370,000)	\$ (5,391,000)
Basic and diluted net loss per share	\$ (0.27)	\$ (0.14)	\$ (0.17)	\$ (0.37)
Shares used in calculating basic and diluted net loss per share	13,920,186	14,540,734	13,933,111	14,532,716