

CHEMBIO DIAGNOSTICS, INC.  
Form 424B3  
December 26, 2007

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**Prospectus Supplement No. 2**

**(to Prospectus dated April 27, 2007)**

**Filed Pursuant to Rule 424(b)(3)**

**Registration File No. 333-125942**

**CHEMBIO DIAGNOSTICS, INC.**

**18,610,710 SHARES OF COMMON STOCK**

This Prospectus Supplement No. 2 supplements and amends the Prospectus dated April 27, 2007 (the "Prospectus") and the Prospectus Supplement, dated December 26, 2007 (the "Prospectus Supplement"), to the Prospectus, all of which relate to the sale from time to time of up to 18,610,710 shares of our common stock by certain selling stockholders.

Due to a clerical error, the "Selling Security Holders" table was incorrect in the Prospectus Supplement.

The information in both the Prospectus and the Prospectus Supplement under the heading "Selling Security Holders" is amended and superseded by the information included herein.

This Prospectus Supplement No. 2 should be read in conjunction with, and delivered with, the Prospectus and the Prospectus Supplement and is qualified by reference to the Prospectus and the Prospectus Supplement.

Our common stock is listed on the OTC Bulletin Board under the symbol "CEMI.OB."

**Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if the Prospectus, the Prospectus Supplement, or this Prospectus Supplement No. 2 is truthful or complete. Any representation to the contrary is a criminal offense.**

The date of this Prospectus Supplement No. 2 is December 26, 2007.

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**SELLING SECURITY HOLDERS**

The named selling security holders set forth below are offering shares of the Company's common stock. The table below assumes the immediate exercise of all warrants to purchase common stock, without regard to other factors which may determine whether such exercises occur. These factors include but are not limited to the terms of the warrant agreements, and the specific exercise price of the securities held by such selling security holder and its relation to the market price. The selling security holders may from time to time offer and sell pursuant to this prospectus up to an aggregate of 15,720,961 shares of our common stock, plus any additional shares of common stock which they may receive at a later date pursuant to the anti-dilution provisions of certain warrants. The selling security holders may, from time to time, offer and sell any or all of the shares that are registered under this prospectus, although they are not obligated to do so.

The following table sets forth, to the Company's best knowledge and belief, with respect to the selling security holders:

- the number of shares of common stock beneficially owned as of December 26, 2007 and prior to the offering contemplated hereby;
- the number of shares of common stock eligible for resale and to be offered by each selling security holder pursuant to this prospectus;
- the number of shares owned by each selling security holder after the offering contemplated hereby assuming that all shares eligible for resale pursuant to this prospectus actually are sold;
- the percentage of the Company's total outstanding shares of common stock beneficially owned by each selling security holder after the offering contemplated hereby; and
- in notes to the table, additional information concerning the selling security holders including any NASD affiliations and any relationships, excluding non-executive employee and other non-material relationships, that a selling security holder had during the past three years with the registrant or any of its predecessors or affiliates.

<b>Selling security holders (C)</b>	<b>Number of Shares of Common Stock Owned Before Offering (A)</b>	<b>Number of Shares to be Offered (B)</b>	<b>Number of Shares Owned After Offering</b>	<b>Percentage of Shares of Common Stock Owned After Offering</b>
Alpha Capital AG <sup>2,3</sup>	1,894,024	660,000	1,894,024	3.07%
Bassett, Truman <sup>1</sup>	42,526	3,866	42,526	0.07%
Baum, Mark L. <sup>2</sup>	911,849	869,622	911,849	1.49%
Bell, Lon E. <sup>2</sup>	378,602	151,178	378,602	0.62%
Beller, Claudio <sup>2</sup>	129,254	11,470	129,254	0.21%
BioEquity Partners, Inc. <sup>1,4</sup>	109,375	84,375	109,375	0.18%
Breitbart, Ted <sup>1,5</sup>	14,208	14,208	14,208	0.02%
Bruce, Richard <sup>1</sup>	105,075	75	105,075	0.17%
Calamaro, Jean-Paul <sup>2</sup>	250,619	23,194	250,619	0.41%
Chrust, Steve <sup>1</sup>	11,605	11,605	11,605	0.02%
Clarke, John R. <sup>1,6</sup>	23,909	23,909	23,909	0.04%
Crestview Capital Master, LLC <sup>7</sup>	24,145,310	5,782,472	24,145,310	36.20%

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Dabush, Ami <sup>2</sup>	460,336	45,871	460,336	0.76%
Daedalus Consulting, Inc. <sup>8</sup>	71,926	71,926	71,926	0.12%
Diamond Deecembra <sup>8</sup>	287,706	287,706	287,706	0.47%
DKR Soundshore Oasis Holding Fund, Ltd. <sup>9</sup>	835,499	835,499	835,499	1.36%
Eckert, Christopher & Lynn <sup>2,10</sup>	229,554	100,000	229,554	0.38%
Engel, Sam <sup>1</sup>	4,118	374	4,118	0.01%
Esfandiari, Javan <sup>1</sup>	754,580	2,007	754,580	1.24%
FAMALOM, LLC <sup>8</sup>	359,634	359,634	359,634	0.59%
Feldman, Stephen <sup>1</sup>	1,868	187	1,868	0.00%
Fuchs, Ari <sup>2,6</sup>	6,641	6,641	6,641	0.01%
Ginsberg, Mike <sup>1</sup>	2,375	216	2,375	0.00%
Glass, Marc <sup>1</sup>	1,883	1,883	1,883	0.00%
Goldberg, Jeffrey <sup>1,11</sup>	27,875	27,875	27,875	0.05%
Greenblatt, Phil <sup>1</sup>	10,347	941	10,347	0.02%
Gregoretti, Gordan	59,458	59,373	59,458	0.10%
Gressel, Daniel <sup>1,12</sup>	6,346	6,346	6,346	0.01%
Guzikowski, Frank J. <sup>1</sup>	178,114	16,192	178,114	0.29%
H.C. Wainwright & Co. <sup>1,13</sup>	53,715	53,715	53,715	0.09%
Haendler, Kurt <sup>1</sup>	91,621	45,998	91,621	0.15%
Haendler, Renata <sup>1</sup>	131,863	59,133	131,863	0.22%
Haendler, Tomas <sup>2,14</sup>	143,726	86,257	143,726	0.24%
Haim, Eduardo <sup>1</sup>	7,115	647	7,115	0.01%
Hamblett, Michael <sup>15</sup>	404,831	382,109		