

Emerging Company Research

BG Medicine — Outperform (1)

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Key Milestones Tracking To Plan

Summary: BG Medicine reported Q1:11 results yesterday and provided an update on its pipeline of novel and proprietary biomarkers in diagnostic development. While it is still early days for the initial launch of the Galectin-3 manual assay through LabCorp, a series of studies and partnership are resulting in palpable enthusiasm within the medical community, setting the stage for the broader test launch on automated platforms which the company expects following a 510(k) approval by year end. AMIPredict, a test being developed to identify patients at high risk of heart attack or stroke, a potentially significant market opportunity, has completed an important verification study on Abbott's leading ARCHITECT platform. Overall, although significant revenues remain several quarters away and development and regulatory risk remain, key development programs are proceeding to plan and the company is confident that its cash position should be sufficient to support operations through 2012.

- **Revenues and Spend Better Than Expected.** Revenues of \$0.9MM driven by Services were better than expected although test revenues were a small contributor, consistent with our expectations. Operating spend of \$3.7MM was lighter than expected with timing of the pending ramp in advance of the broader Galectin-3 launch and AMIPredict regulatory submission being the key driver. Burn was about \$3MM in Q1. Following its February IPO, BGMD ended Q1 with \$35MM in cash.
- **Galectin-3 and AMIPredict Progressing As Expected.** Initial 510(k) approval of an automated Galectin-3 test is still expected by year end. Additional partnerships and studies have begun to gain traction and clinician sentiment was noted as enthusiastic. AMIPredict completed verification studies on the ARCHITECT platform and following an upcoming analysis of a validation study, the company expects initial 510(k) submission by year end.

BGMD (05/12)	\$7.47	Revenue \$MM							
Mkt cap	\$134.5MM	FY	2010	2011E		2012E		2013E	
Dil shares out	18.0MM	Dec	Actual	Prior	Current	Prior	Current	Prior	Current
Avg daily vol	7.0K	Q1	—	—	0.9A	0.4	0.7	—	—
52-wk range	\$6.2-9.5	Q2	—	0.1	0.2	1.1	1.4	—	—
Dividend	Nil	Q3	—	0.1	0.2	2.1	2.9	—	—
Dividend yield	Nil	Q4	—	0.2	0.4	4.1	5.6	—	—
BV/sh	NA	Year	0.8	0.5	1.6	7.6	10.6	66.8	62.0
Net cash/sh	\$2.80	EV/S	—	—	75.0x	—	11.3x	—	1.9x
Debt/cap	NA								
ROIC (LTM)	NA								
5-yr fwd EPS growth (Norm)	NA								
		EPS \$							
		FY	2010	2011E		2012E		2013E	
		Dec	Actual	Prior	Current	Prior	Current	Prior	Current
		Q1	—	—	(0.26)A	(0.40)	(0.37)	—	—
		Q2	—	(0.34)	(0.26)	(0.39)	(0.36)	—	—
		Q3	—	(0.33)	(0.32)	(0.37)	(0.33)	—	—
		Q4	—	(0.32)	(0.37)	(0.32)	(0.26)	—	—
S&P 500	1348.7	Year	(6.12)	(1.26)	(1.23)	(1.39)	(1.33)	0.01	(0.25)
		P/E	—	—	—	—	—	—	—

Investment Thesis

BG Medicine expects a series of regulatory and clinical milestones in 2011-2012. Although initially launched in the U.S. in Q1:2011, the full market launch for BGM Galectin-3 will likely not commence until closer to 2013, which is also when a higher ASP could come through via an analyte specific CPT code. This is expected to coincide with launches of AMIPredict and LipidDx, which could make 2013 a year of explosive growth. We believe the company needs to penetrate only a small fraction of its target markets, which we estimate exceed \$2Bn, to significantly surpass our revenue forecasts over the next 18-24 months. Because its tests are proprietary and run on well established platforms, BGMD should also be viewed as a potential acquisition target for a variety of large players who are always looking to add to their test "menus." Given the steady series of milestones beginning in 2011 and the significant markets being addressed, we believe BGMD is an attractive asset for risk-tolerant long term investors.

Key Milestones / Catalysts

<u>Milestone / Catalyst</u>	<u>Est. Timing</u>
Manual Galectin-3 test ramp through LabCorp	H1:2011
510(k) clearance for automated Galectin-3 test through partners	By YE2011
Galectin-3 label extension: Post MI prognosis assessment	Late 2011
Galectin-3 label extension: Crestor (rosuvastatin) response assessment	Late 2011
AMIPredict initial launch (manual test version)	2012
LipidDx initial launch (manual test version)	2012

Source: Company reports and Cowen and Company estimates

Positives

1. High profile partnerships feed discovery, development and commercial strategy
 - a. Initiatives and partnerships provide access to highly valued samples - BGMD's proprietary biomarker discovery platform has allowed the company to establish collaborations and partnerships with leading companies and consortia in the area of cardiovascular disease such as the Framingham Heart Study, Humana and Merck. These collaborations provide the company a unique avenue through which to discover and develop proprietary biomarkers.
 - b. Established partnerships with leading IVD instrument vendors - BGMD has established partnerships with diagnostics instrumentation leaders including Abbott, bioMeriue, Alere and Siemens. These provide the company with access to a significant portion of higher volume testing labs in the world. These partnerships allow BGMD to access the market without the need to invest in its own instrumentation platform.
2. Targeting large market opportunities - BGM Galectin-3, AMIPredict and LipidDx target significant market opportunities within the screening and risk assessment portions of the cardiovascular diagnostics market. We estimate that in aggregate, these tests target a market opportunity exceeding \$2B.

Negatives

1. Regulatory - BGMD's strategy is to pursue 510(k) clearance for its tests in the US. The 510(k) process has received much scrutiny over the past few years and there is a risk FDA will increase the amount of data required from diagnostic providers, which would impact test approval timelines and investment requirements.
2. Reimbursement - BGMD Galectin-3 should be able to cross-walk to CPT codes for BNP to achieve consistent reimbursement. However, when working without an analyte specific code, there is always a risk that reimbursement will be less than the company expects or may not be reimbursed at all, which would materially impact uptake.
3. Reliance on partners - Although BGMD has done an impressive job of establishing partnerships with leading industry players; the company is reliant upon these partners for development and commercialization of its key tests.
4. Pre-commercial stage, relatively low visibility - While the diagnostic markers being developed by BGMD have ample clinical evidence, and market potential exists, the company remains a very early commercial stage and had sub \$1MM in revenue in 2010. Furthermore, uncertainty regarding reimbursement makes visibility on uptake and market potential somewhat difficult to quantify at this point. The company is likely to burn through a material portion of their cash position over the next several quarters. Given the uncertainty regarding product launch and the cash burn, timing and execution risk for the company will remain high.

BG Medicine - Income Statement

(in millions)	Q1:11	Q2:11E	Q3:11E	Q4:11E	Q1:12E	Q2:12E	Q3:12E	Q4:12E	2010	2011E	2012E	2013E	2014E
Total Revenue	\$0.9	\$0.2	\$0.2	\$0.4	\$0.7	\$1.4	\$2.9	\$5.6	\$0.8	\$1.6	\$10.6	\$62.0	\$119.3
Cost of Sales	0.2	0.1	0.1	0.2	0.3	0.6	1.1	2.1	0.8	0.5	4.2	20.8	38.2
Gross Profit	\$0.7	\$0.1	\$0.1	\$0.2	\$0.4	\$0.8	\$1.7	\$3.5	\$0.0	1.1	6.4	41.1	\$81.1
R&D	1.7	2.6	3.0	3.1	3.2	3.4	3.5	3.6	6.5	10.4	13.7	16.8	21.5
SG&A	2.0	3.0	4.0	5.0	5.2	5.4	5.5	5.6	8.1	14.0	21.7	24.9	29.8
Operating Expenses	3.7	5.6	7.0	8.1	8.4	8.8	9.0	9.2	14.6	24.4	35.4	41.7	51.3
Income (loss) from Operations	(\$3.0)	(\$5.5)	(\$6.9)	(\$7.9)	(\$8.0)	(\$8.0)	(\$7.3)	(\$5.7)	(\$14.6)	(\$23.3)	(\$29.0)	(\$0.6)	\$29.8
Other income (expenses)	0.1	0.3	0.4	0.5	0.5	0.5	0.5	0.5	2.6	1.3	2.0	2.0	2.0
Pre-Tax income (loss)	(3.1)	(5.8)	(7.3)	(8.4)	(8.5)	(8.5)	(7.8)	(6.2)	(17.2)	(24.6)	(31.0)	(2.6)	27.8
Taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	3.5	9.7
Net Income	(\$3.1)	(\$5.8)	(\$7.3)	(\$8.4)	(\$8.5)	(\$8.5)	(\$7.8)	(\$6.2)	(\$17.2)	(\$24.6)	(\$31.0)	(\$6.0)	\$18.1
Shares Outstanding	12.2	22.4	22.6	22.8	23.0	23.2	23.4	23.6	3.0	20.0	23.3	24.1	25.1
EPS	(\$0.26)	(\$0.26)	(\$0.32)	(\$0.37)	(\$0.37)	(\$0.36)	(\$0.33)	(\$0.26)	(\$6.12)	(\$1.23)	(\$1.33)	(\$0.25)	\$0.72
Margin Analysis (% of sales)													
Gross Profit	82.3%	50.0%	50.0%	52.0%	58.0%	58.0%	60.0%	62.0%	4.0%	67.4%	60.7%	66.4%	68.0%
R&D	200.4%	1656.1%	1382.5%	768.8%	452.4%	236.3%	122.6%	64.2%	798.4%	638.0%	129.1%	27.1%	18.0%
SG&A	232.4%	1910.8%	1843.3%	1239.9%	735.1%	375.3%	192.6%	99.8%	989.0%	856.9%	204.5%	40.2%	25.0%
Operating Profit (loss)	NM	NM	NM	NM	-1200.2%	-588.3%	-272.7%	-110.9%	NM	NM	NM	-0.9%	25.0%
Taxes (% of pre tax income)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	35.0%	35.0%
Net Income	NM	NM	NM	NM	-1200.2%	-588.3%	-272.7%	-110.9%	NM	NM	NM	-9.7%	15.2%
Growth Analysis (% y/ y)													
Revenue					-17.3%	816.6%	1215.9%	1291.6%	-	99.3%	550.2%	484.0%	92.5%
Gross Profit									-	3235.4%	484.8%	539.0%	97.2%
R&D					86.8%	30.8%	16.7%	16.1%	-	59.2%	31.6%	22.6%	27.8%
SG&A					161.7%	80.0%	37.5%	12.0%	-	72.7%	55.1%	14.7%	19.8%
Operating Profit (loss)					-	-	-	-	-	-	-	-	-5374.9%
Taxes (% of pre tax income)					-	-	-	-	-	-	-	-	-
Net Income					-	-	-	-	-	-	-	-	-

Source: Company reports and Cowen and Company estimates

Addendum

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Ticker	Company Name
BGMD	BG Medicine

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(a) Assumptions: Time horizon is 12 months; S&P 500 is flat over forecast period.

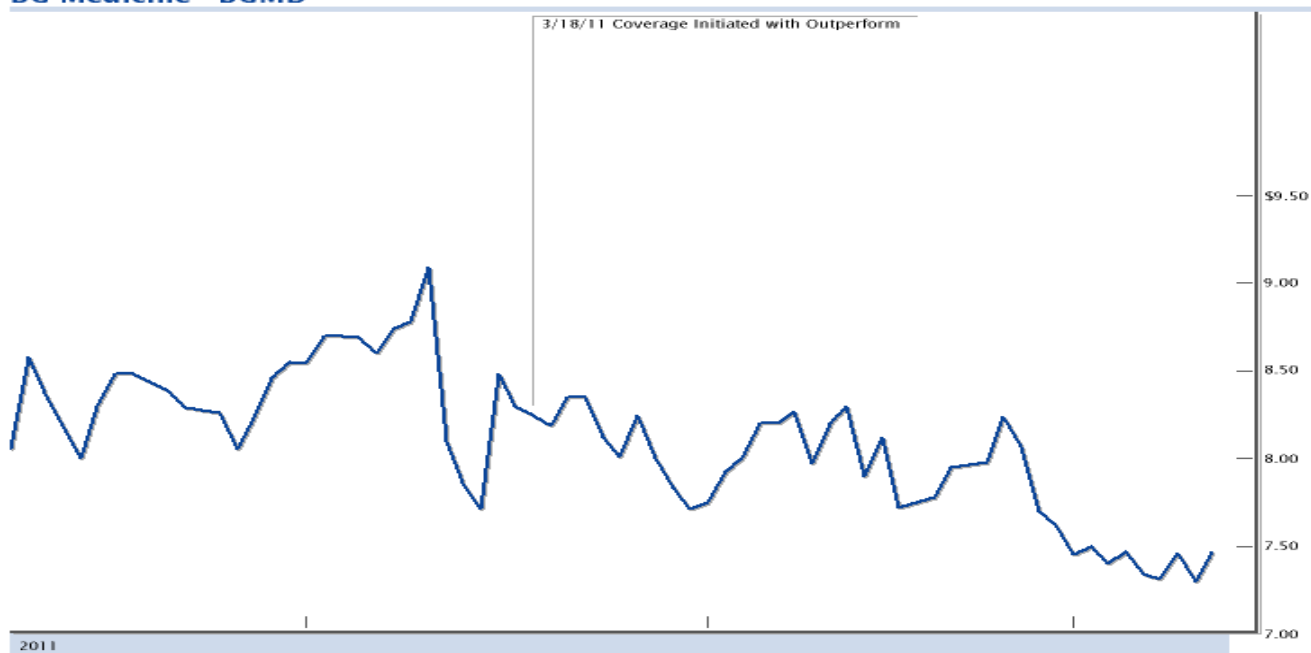
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BG Medicine - BGMD



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