

Emerging Company Research

BG Medicine — Outperform (1)

August 11, 2011

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Key Milestones and Spending Remain On Track

Summary: BG Medicine reported Q2:11 results this morning and provided an update on its pipeline of novel and proprietary biomarkers in diagnostic development. A series of publications and medical meeting presentations are 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.

- **Spend Lighter Than Expected.** Revenues of \$0.22MM were expectedly down from \$0.86MM in Q1 on reduced HRP initiative services. Test revenues remain minimal. Operating spend of \$4.9MM 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. Following its February IPO, BGMD ended Q2 with \$32MM 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. A series of publications and presentations at the European Society of Cardiology meeting (August 28-31) and the Heart Failure Society of America meeting (September 18-21) should help to continue to build the clinical case in advance of the 510(k) approval. AMIPredict completed verification studies and migration to the ARCHITECT platform and still expects initial 510(k) submission by year end.
- **Cash On Hand Should Support Operations Through 2012.**

BGMD (08/11)	\$7.39	Revenue \$MM							
Mkt cap	\$141.9MM	FY	2010	2011E	2012E	2013E			
Dil shares out	19.2MM	Dec	Actual	Prior	Current	Prior	Current	Prior	Current
Avg daily vol	1.1K	Q1	—	—	0.9A	—	0.7	—	—
52-wk range	\$5.5-10.4	Q2	—	—	0.2A	—	1.4	—	—
Dividend	Nil	Q3	—	—	0.2	—	2.9	—	—
Dividend yield	Nil	Q4	—	—	0.4	—	5.6	—	—
BV/sh	NA	Year	0.8	1.6	1.7	—	10.6	—	62.0
Net cash/sh	\$1.70	EV/S	—	—	70.6x	—	11.3x	—	1.9x
Debt/cap	NA								
ROIC (LTM)	NA								
5-yr fwd EPS growth (Norm)	NA								
S&P 500	1146.0	EPS \$	FY	2010	2011E	2012E	2013E		
		Dec	Actual	Prior	Current	Prior	Current	Prior	Current
		Q1	—	—	(0.26)A	(0.37)	(0.42)	—	—
		Q2	—	—	(0.25)A	(0.36)	(0.42)	—	—
		Q3	—	(0.32)	(0.35)	(0.33)	(0.39)	—	—
		Q4	—	(0.37)	(0.42)	(0.26)	(0.30)	—	—
		Year	(6.12)	(1.23)	(1.30)	(1.33)	(1.53)	(0.25)	(0.29)
		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.

BG MEDICINE (BGMD: OUTPERFORM) - QUARTERLY SNAPSHOT

Conference Call: August 11 before the market open

Cowen vs. Consensus (\$MM, except EPS)

	Q2:10A	Q2:11E		Q2:11A	Full Year Guidance
		Cowen	Consensus		
Revenue	NA	\$0.16	\$0.20	\$0.22	Not provided
Gross Margin	NA	NM	16.7%	NM	Not provided
Op.Margin	NA	NM	NM	NM	Not provided
EPS	NA	(\$0.26)	(\$0.35)	(\$0.25)	Not provided

Selected Revenue Metrics (\$MM, except EPS)

	Q2:11E	Q2:11A	Comments
IVD Kits	\$0.06	\$0.12	Initial manual BGM Galectin-3 Test revenues via LabCorp began to trickle in in Q2, however, not likely to a significant degree. A slow but steady sequential growth ramp is forecast over the course of 2011 for IVD revenues; our FY forecast for IVD revenues is \$0.6MM, reflecting our assumptions that Galectin is at least a year away from generating any meaningful revenues.
Growth (Y/Y)	--	--	
CLIA Lab	\$0.00	\$0.00	We do not expect material CLIA Lab revenue contribution until 2012 with the initial launch of AMIPredict. We expect CLIA Lab based revenues to contribute a majority of revenues by 2013, however, reflecting AMIPredict's significantly higher projected ASP (\$100/test)
Growth (Y/Y)	--	--	
Contract Services	\$0.10	\$0.10	Beginning this year, we expect BGMD's revenue will be generated almost exclusively from for the sale of IVD Kits and CLIA Lab Services as large service contracts such as HRP are completed.
Growth (Y/Y)	--	--	

Income Statement (\$MM, except EPS)

	Q2:11E	Q2:11A	Comments
Revenue	\$0.16	\$0.22	In the early innings here, initial signs of LabCorp's commitment on the manual test, updates on regulatory and clinical milestones and evidence of clinician's recognizing Galectin-3's value proposition are more important than revenues. Our FY revenue forecast of \$1.7MM reflects our low expectations for the manual test, which is the primary revenue contributor this year.
Growth (Y/Y)	--	--	
Gross Profit	\$0.08	\$0.03	The majority of COGS on the Galectin-3 test will come from royalty obligations as partners bear most of the expenses. Although it has lower revenue potential, the manual test will carry a higher gross margin because a royalty to LabCorp is only owed on automated test sales. COGS in Q2 are primarily related to supporting Service contracts.
Margin	NM	NM	
R&D	\$2.60	\$2.36	BGMD's various collaborations should allow it to keep R&D spend in check. We forecast R&D expense of ~\$10-11MM in 2011.
% of sales	NM	NM	
SG&A	\$3.00	\$2.51	We forecast SG&A expense of ~\$13M in 2011; a good portion of the Y/Y growth attributed to public company-related expenses as the company builds out its G&A infrastructure.
% of sales	NM	NM	
Operating Profit	(\$5.52)	(\$4.84)	We forecast a full year Operating Loss of about \$22MM. Through Q2, cash burn is tracking a bit below our expectations - the company is practicing good cost control discipline.
Margin	NM	NM	
Non-Operating Items	\$0.30	(\$0.01)	--
Pre-Tax Income	(\$5.82)	(\$4.84)	--
Taxes	\$0.00	\$0.00	--
Rate	NM	NM	--
Net Income	(\$5.82)	(\$4.84)	--
Margin	NM	NM	--
Earnings Per Share	(\$0.26)	(\$0.25)	--
Growth (Y/Y)	--	--	--
Share Count(MM)	22.4	19.2	--

Key Focus Areas

LabCorp: Sales and marketing strategies; how many sales people are actively marketing Galectin-3? Uptake trends for first full quarter of LabCorp distribution of manual test

Automated Galectin-3 Test: Updated timelines for 510(k) clearance of automated Galectin-3 test [via partnerships]

Galectin-3 Label Extensions: Updates of Post MI prognosis assessment and Crestor (rosuvastatin) response assessment indications

AMIPredict: What are the notable clinical study publications / presentations investors should look out for and what are their associated timelines? Timelines for manual version launch

Operating Spend / Cash Burn: Company estimates for cash burn and capitalization strategy over next 12 - 18 months

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

BG Medicine - Income Statement

(in millions)	Q1:11	Q2:11	Q3:11E	Q4:11E	Q1:12E	Q2:12E	Q3:12E	Q4:12E	2010	2011E	2012E	2013E	2014E	2015E	3-Yr CAGR
Total Revenue	\$0.9	\$0.2	\$0.2	\$0.4	\$0.7	\$1.4	\$2.9	\$5.6	\$0.8	\$1.7	\$10.6	\$62.0	\$119.3	\$188.9	313%
Cost of Sales	0.2	0.2	0.1	0.2	0.3	0.6	1.1	2.1	0.8	0.6	4.2	20.8	38.2	56.7	
Gross Profit	\$0.7	\$0.0	\$0.1	\$0.2	\$0.4	\$0.8	\$1.7	\$3.5	\$0.0	1.1	6.4	41.1	\$81.1	\$132.2	326%
R&D	1.7	2.4	2.9	3.2	3.2	3.4	3.5	3.6	6.5	10.1	13.7	16.8	21.5	30.2	
SG&A	2.0	2.5	3.7	4.7	5.0	5.3	5.5	5.6	8.1	12.8	21.4	24.9	29.8	34.0	
Operating Expenses	3.7	4.9	6.5	7.9	8.2	8.7	9.0	9.2	14.6	23.0	35.1	41.7	51.3	64.2	
Income (loss) from Operations	(\$3.0)	(\$4.8)	(\$6.4)	(\$7.7)	(\$7.8)	(\$7.9)	(\$7.3)	(\$5.7)	(\$14.6)	(\$21.9)	(\$28.7)	(\$0.6)	\$29.8	\$68.0	-211%
Other income (expenses)	0.1	(0.0)	0.4	0.5	0.5	0.5	0.5	0.5	2.6	1.0	2.0	2.0	2.0	2.0	
Pre-Tax income (loss)	(3.1)	(4.8)	(6.8)	(8.2)	(8.3)	(8.4)	(7.8)	(6.2)	(17.2)	(22.9)	(30.7)	(2.6)	27.8	66.0	
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	23.1	
Net Income	(\$3.1)	(\$4.8)	(\$6.8)	(\$8.2)	(\$8.3)	(\$8.4)	(\$7.8)	(\$6.2)	(\$17.2)	(\$22.9)	(\$30.7)	(\$6.0)	\$18.1	\$42.9	
Shares Outstanding	12.2	19.2	19.4	19.6	19.8	20.0	20.2	20.4	3.0	17.6	20.1	20.9	21.9	22.9	
EPS	(\$0.26)	(\$0.25)	(\$0.35)	(\$0.42)	(\$0.42)	(\$0.42)	(\$0.39)	(\$0.30)	(\$6.12)	(\$1.30)	(\$1.53)	(\$0.29)	\$0.83	\$1.87	
Margin Analysis (% of sales)															
Gross Profit	82.3%	12.7%	50.0%	52.0%	58.0%	58.0%	60.0%	62.0%	4.0%	61.9%	60.7%	66.4%	68.0%	70.0%	
R&D	200.4%	1068.3%	1313.4%	793.6%	452.4%	236.3%	122.6%	64.2%	798.4%	596.8%	129.1%	27.1%	18.0%	16.0%	
SG&A	232.4%	1134.8%	1682.0%	1165.5%	706.8%	368.3%	192.6%	99.8%	989.0%	757.3%	201.6%	40.2%	25.0%	18.0%	
Operating Profit (loss)	NM	NM	NM	NM	-1171.9%	-581.3%	-272.7%	-110.9%	NM	NM	NM	-0.9%	25.0%	36.0%	
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%	35.0%	
Net Income	NM	NM	NM	NM	-1171.9%	-581.3%	-272.7%	-110.9%	NM	NM	NM	-9.7%	15.2%	22.7%	
Growth Analysis (% y/y)															
Revenue					-17.3%	551.1%	1215.9%	1291.6%	-	107.1%	525.7%	484.0%	92.5%	58.3%	
Gross Profit					-	3082.4%	513.0%	539.0%	-	3082.4%	513.0%	539.0%	97.2%	63.0%	
R&D					86.8%	44.0%	22.8%	12.5%	-	54.8%	35.3%	22.6%	27.8%	40.7%	
SG&A					151.6%	111.3%	50.7%	19.1%	-	58.6%	66.6%	16.4%	19.8%	14.0%	
Operating Profit (loss)					-	-	-	-	-	-	-	-	-5374.9%	128.0%	
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.

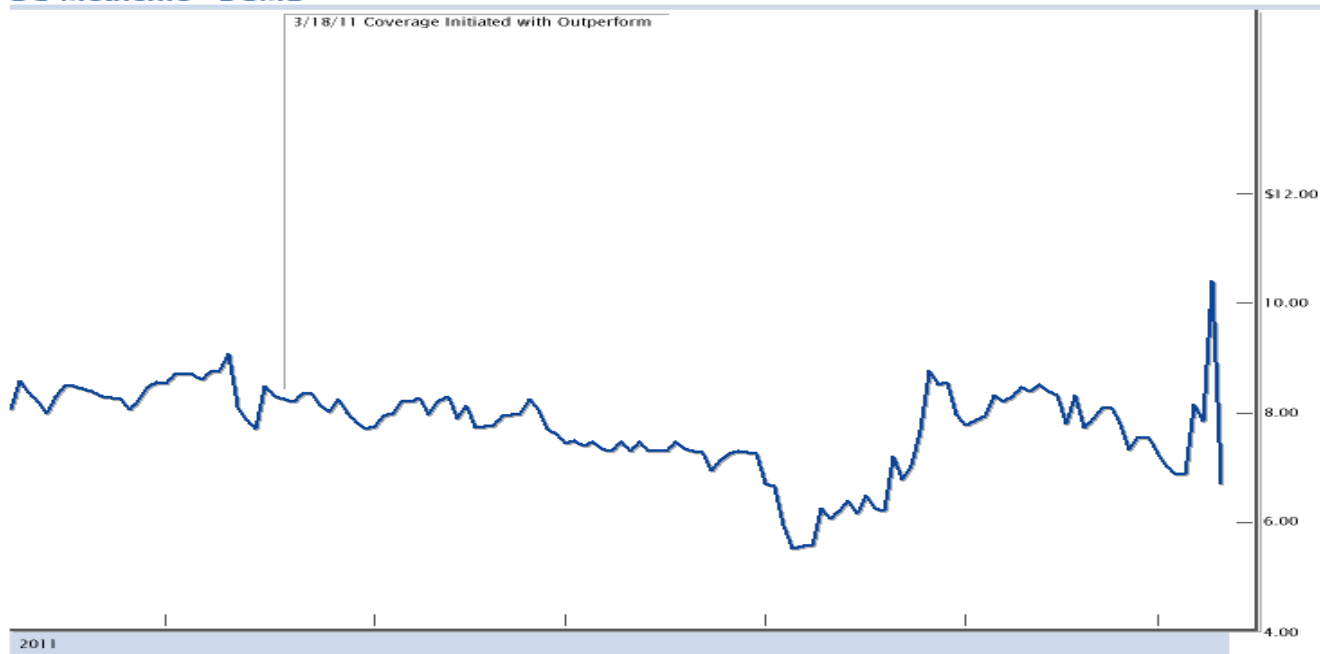
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BG Medicine - BGMD



Pricing data provided by Reuters America. Chart as of 8/10/11 in USD.