

# Emerging Company Research

## BG Medicine — Outperform (1)

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## AMIPredict and Spending on Track; Galectin Submission Now Expected in Q1:12

**Summary:** BG Medicine reported Q3:11 results yesterday and provided an update on its pipeline of novel and proprietary biomarkers in diagnostic development. The following are our key observations.

- **Current Cowen Investment Thesis: BGMD.** BG Medicine expects a series of regulatory and clinical milestones in 2011-2012. Although initially launched in the US in Q1:11, the full market launch of the Galectin-3 test will likely not commence until 2013 following approval of automated test products and potentially a specific CPT code. This could coincide with a broader launch of AMIPredict, which could make 2013 a year of explosive growth. BGMD should also be viewed as a potential acquisition target for a players looking to add to their test menus. Given the steady series of milestones beginning in 2011, the significant markets being addressed and the company's demonstrated ability to control cash burn, we believe BGMD is an attractive asset for risk-tolerant long term investors.
- **How Does Quarterly Update Impact BGMD Investment Thesis?** At this stage of development, milestone timelines and cash control are more important than revenues for BGMD. A discussion of some recent data presentations is included in this report. Initial 510(k) submission for an automated Galectin-3 test [through partners] had been expected by year end 2011, but is now expected in Q1:12. Although a one quarter delay does not materially impact our model, it is indicative of the inherent challenges associated with relying on partnerships for product development; this remains a risk. AMIPredict, however, remains on track for 510(k) submission by YE2011; this product has better economics for BGMD and a larger addressable market than Galectin-3 but carries significant market / competitive risk. BGMD continues to do a nice job of controlling costs (cash burn \$4MM in Q3). Cash on hand (\$28MM at the end of Q3:11) is expected to be able to support operations through 2012.

BGMD (11/03)	\$5.05	Revenue \$MM							
Mkt cap	\$97.0MM	FY	2010	2011E		2012E		2013E	
Dil shares out	19.2MM	Dec	Actual	Prior	Current	Prior	Current	Prior	Current
Avg daily vol	14.2K	Q1	—	—	0.9A	—	0.7	—	—
52-wk range	\$3.3-10.4	Q2	—	—	0.2A	—	1.4	—	—
Dividend	Nil	Q3	—	—	0.2A	—	2.9	—	—
Dividend yield	Nil	Q4	—	—	0.4	—	5.6	—	—
BV/sh	NA	Year	0.8	—	1.7	—	10.6	62.0	54.1
Net cash/sh	\$1.70	EV/S	—	—	70.6x	—	11.3x	—	2.2x
Debt/cap	NA								
ROIC (LTM)	NA								
5-yr fwd EPS	NA	EPS \$							
		FY	2010	2011E		2012E		2013E	
		Dec	Actual	Prior	Current	Prior	Current	Prior	Current
		Q1	—	—	(0.26)A	—	(0.42)	—	—
		Q2	—	—	(0.25)A	—	(0.42)	—	—
		Q3	—	—	(0.25)A	—	(0.39)	—	—
S&P 500	1261.2	Q4	—	(0.42)	(0.37)	(0.30)	(0.31)	—	—
		Year	(6.12)	(1.30)	(1.20)	—	(1.53)	(0.29)	(0.47)
		P/E	—	—	—	—	—	—	—

## BG MEDICINE (BGMD: EMERGING OUTPERFORM) - QUARTERLY SNAPSHOT

Conference Call: November 3; pre market

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

	Q3:10A	Q3:11E		Q3:11A	Full Year Guidance
		Cowen	Consensus		
Revenue	NA	\$0.16	\$0.20	\$0.18	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

## Income Statement (\$MM, except EPS)

	Q3:11E	Q3:11A	Comments
<b>Revenue</b>	<b>\$0.2</b>	<b>\$0.2</b>	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)	--	--	
<b>Gross Profit</b>	<b>\$0.1</b>	<b>\$0.1</b>	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	
<b>R&amp;D</b>	<b>\$2.9</b>	<b>\$1.9</b>	Tracking below our FY forecast for R&D spend to approximate ~\$10-11MM in 2011. BGMD's various collaborations should allow it to keep R&D spend in check.
% of sales	NM	NM	
<b>SG&amp;A</b>	<b>\$3.7</b>	<b>\$3.1</b>	Tracking below our FY forecast for SG&A spend to approximate ~\$13MM in 2011. This is still expected to ramp significantly to support the roll out of the Galectin-3 and AMIPredict tests, in addition to public company-related expenses as the company builds out its G&A infrastructure.
% of sales	NM	NM	
<b>Operating Profit</b>	<b>(\$6.39)</b>	<b>(\$4.92)</b>	We forecast a full year Operating Loss of about \$22MM; cost control / cash burn is tracking better than expected and approximated \$1.3MM per month in Q3.
Margin	NM	NM	
<b>Non-Operating Items</b>	<b>\$0.4</b>	<b>(\$0.0)</b>	--
<b>Pre-Tax Income</b>	<b>(\$6.8)</b>	<b>(\$4.9)</b>	--
<b>Taxes</b>	<b>\$0.0</b>	<b>\$0.0</b>	--
Rate	NM	NM	
<b>Net Income</b>	<b>(\$6.8)</b>	<b>(\$4.9)</b>	--
Margin	NM	NM	
<b>Earnings Per Share</b>	<b>(\$0.35)</b>	<b>(\$0.25)</b>	--
Growth (Y/Y)	--	--	
<b>Share Count(MM)</b>	<b>19.4</b>	<b>19.3</b>	--

## Key Focus Areas

**LabCorp:** Sales and marketing strategies; how many sales people are actively marketing Galectin-3? Uptake trends from LabCorp, HDL and Cleveland Heart Lab distribution of manual test.

**Automated Galectin-3 Test:** Initial submission now expected in Q1:12 versus the prior estimate of by YE2011.

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

**AMIPredict:** Still on track for 510(k) submission by YE2011. What are the notable clinical study publications / presentations investors should look out for and what are their associated timelines?

**Operating Spend / Cash Burn:** Still on track for current cash to support operations through at least the end of 2012.

Source: Company reports and Cowen and Company

## Continuing to Build the Clinical Case for Galectin-3 Testing

BG Medicine is focused on the discovery, development and commercialization of high-value clinical biomarkers and diagnostic tests. The company's lead product is a test for galectin-3, a protein shown to be involved in cardiac remodeling in heart failure physiology. Over the past several weeks, a series of publications and medical meeting presentations have continued to build the clinical value proposition for galectin-3 testing and are setting the stage for the broader test launch on automated platforms which the company expects following initial 510(k) filings beginning in Q1:12. 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.

### Key Milestones / Catalysts

Milestone / Catalyst	Est. Timing
Manual Galectin-3 test ramp through LabCorp, Health Diagnostic Labs	H1:2011
Initial 510(k) filing for automated Galectin-3 test through partners	Q1:12
Galectin-3 label expansion: identifying risk of heart failure	2012E
Galectin-3 label expansion: Crestor (rosuvastatin) response assessment	2012E
AMIPredict initial 510(k) filing	By YE2011
Lipid Dx initial launch	2012
Specific CPT code for Galectin-3	2013

Source: Company reports and Cowen and Company estimates

## **Presentations at the European Society of Cardiology (ESC) Congress**

ESC 2011 was held in Paris August 27-31. Results from several studies utilizing galectin-3 measurement were presented that addressed a number of key topics including: (1) the value of galectin-3 testing as a predictor of response to statin therapy in chronic heart failure (CHF); (2) the ability of galectin-3 measurement to identify individuals at risk for CV events prior to their first diagnosis of heart failure; (3) role and mechanism of galectin-3 in CHF development. Below are summaries from key presentations.

### **Galectin-3 as a Predictor of Response to Statin Therapy in CHF**

A sub-study (n=1,462) of the Controlled Rosuvastatin Multinational Trial in Heart Failure (CORONA) trial examined whether statins may perform differently in patients with higher or lower plasma levels of galectin-3. The study was led by Dr. Lars Gullestad, MD, PhD, Professor of Cardiology in the Department of Cardiology at Rikshospitalet University Hospital, Oslo, Norway. Primary endpoints were CV death or nonfatal myocardial infarction (MI) or stroke.

Results demonstrated a significant interaction between baseline galectin-3 concentration and the effect of rosuvastatin (Crestor) therapy on the primary endpoint ( $P=0.036$ ). Only patients with lower levels of galectin-3 ( $\leq 19.0$  ng/mL) obtained a benefit from rosuvastatin treatment. This benefit was of clinical significance – a 35% reduction in the primary end point. In patients with galectin-3 levels  $\geq 19.0$  ng/mL, no such beneficial effect of rosuvastatin therapy was seen. The investigators concluded that measuring blood levels of galectin-3 can be an effective way to segment the heart failure patient population to identify the subgroups that derive a marked clinical benefit from rosuvastatin therapy from those that do not.

### **Epidemiological Study of the Role of Galectin-3 as a Predictor of CV Disease**

The Prevention of Renal and Vascular End-Stage Disease (PREVEND) study is the first epidemiological study to examine the hypothesis that elevated levels of galectin-3 may be associated with an increased risk of certain diseases and death in the general population. The study was led by Dr. Rudolf de Boer, MD, PhD from the University Medical Center Groningen. The study analyzed about 8,000 patients with a median follow-up of about 10 years. Primary endpoints were CV events and all-cause mortality.

Results demonstrated that, after adjusting for classical CV risk factors, galectin-3 levels predicted all-cause mortality with statistical significance ( $P=0.036$ ; HR = 1.09). Subjects with the highest galectin-3 levels had a 3-fold mortality risk. The investigators concluded that these results underscore the potential involvement of galectin-3 in CV disease and the potential value in risk stratification using galectin-3 testing.

## **Presentations at the Annual Scientific Meeting of the Heart Failure Society of America**

HFSA 2011 was held in Boston September 18-21. Results from several studies utilizing galectin-3 measurement were presented that addressed the role of galectin-3 levels in predicting the likelihood of near-term rehospitalization for recently discharged heart failure patients and the utility of serial measurements of galectin-3 levels in predicting morbidity and mortality risk. Below are summaries from key presentations.

### **Association Between Galectin-3 Levels and Rehospitalization in HF**

The ability of galectin-3 blood levels in heart failure patients to predict the likelihood of near-term unplanned hospital re-admission for heart failure was examined in a study led by Dr. Rudolf de Boer, MD, PhD from the University Medical Center Groningen. The study included heart failure patients from three cohorts: the Coordinating Study Evaluating Outcomes of Advising and Counseling in Heart Failure (COACH) study, the Pro-BNP Investigation of Dyspnea in the Emergency Department (PRIDE) study and the University of Maryland Pro-BNP for Diagnosis and Prognosis in Patients Presenting with Dyspnea study. Galectin-3 was measured in a total of 892 patients diagnosed with heart failure.

The study demonstrated that, compared to heart failure patients with galectin-3 levels <17.8 ng/mL, those with levels >17.8 ng/mL were significantly more likely to be rehospitalized for heart failure after initial discharge, being 2 to 3 times more likely to be readmitted to the hospital in the near-term (odds ratio (OR) for 30 days: 2.80 (95% CI: 1.41-5.57); OR for 90 days: 3.01 (1.79-5.05);  $p < 0.01$  for all). Baseline galectin-3 remained a significant predictor of hospital readmission even upon adjustment for age, gender, renal function and NT-proBNP levels. The investigators concluded that Galectin-3 testing may be of benefit in programs aiming to reduce hospital readmission rates for heart failure and to tailor interventions to offer those at highest risk the most advanced interventions.

### **Changes in Galectin-3 Levels Over Time as a Predictor of Morbidity and Mortality in HF**

Dr. de Boer's group also examined whether changes in galectin-3 over time are associated with changes in mortality and morbidity in heart failure patients. Galectin-3 was measured at baseline and at 3 months in the CORONA study and at baseline and 6 months in the COACH study.

In this study, patients whose galectin-3 levels increased from <17.8 ng/mL to >17.8 ng/mL over 3-6 months had a prognosis comparable to high risk patients whose levels remained elevated above 17.8 ng/mL over the same time frame. Similarly, an increase of greater than +10% in galectin-3 over 3-6 months, independent of initial level, was found to correspond to an approximately 60% higher risk of morbidity and mortality relative to patients with stable values of the same time frame. The investigators concluded that evaluation of changes in galectin-3 levels over time provides significant predictive value in identifying heart failure patients at elevated risk for subsequent heart failure morbidity and mortality. We add that building credibility for the value of repeat galectin-3 testing has important implications on the company's revenue potential and will be a continued area of focus for investors.

## Market Opportunity Overview

### Galectin-3

The market opportunity for BGM Galectin-3 tests in heart failure patients, in terms of test volume, is significant. According to the American Heart Association, there are almost 6MM individuals in the U.S. with heart failure. These patients have about 2.3 outpatient physician visits per year; this equates to roughly 13.8MM outpatient visits per year by heart failure patients in the U.S. The table below walks through market opportunity estimates for the galectin-3 family of tests by indication. Not including the Crestor indication, we estimate the market opportunity for BGM Galectin-3 to approximate \$700MM.

#### Galectin-3 in Heart Failure – Market Opportunity Overview by Indication

	Indication	Market Opp – Volumes	Market Opp - Revenue	Economics
<b>BGM Galectin-3 – manual</b>	With clinical evaluation as an aid in assessing the prognosis of patients diagnosed with chronic heart failure	<ul style="list-style-type: none"> <li>• 6MM HF pts in US</li> <li>• 2.3 visits / pt / yr</li> <li>• ~14M tests / year</li> </ul>	<ul style="list-style-type: none"> <li>• \$7.5 ASP / test</li> <li>• ~\$104MM / yr US</li> <li>• + EU 50% of US</li> <li>• <b>Total = ~\$155MM</b></li> </ul>	<ul style="list-style-type: none"> <li>• BGMD receives \$5-10 per test from LH</li> <li>• BGMD pays low single digits revenue royalty to ACS (licensor)</li> </ul>
<b>BGM Galectin 3 – automated</b>	TBD. With clinical evaluation as an aid in prognosis of patients with heart failure	<ul style="list-style-type: none"> <li>• 6MM HF pts in US</li> <li>• 2.3 visits / pt / yr</li> <li>• ~14M tests / year</li> </ul>	<ul style="list-style-type: none"> <li>• \$12.5 ASP / test</li> <li>• ~\$173MM / yr US</li> <li>• + EU 50% of US</li> <li>• <b>Total = ~\$258MM</b></li> <li>• Note: This estimate overlaps with estimate for manual test above</li> </ul>	<ul style="list-style-type: none"> <li>• BGMD receives \$10-15 per test from partners</li> <li>• BGMD pays low single digits revenue royalty to ACS (licensor)</li> <li>• BGMD pays single digit revenue royalty to LH for first 3y of automated test commercialization</li> </ul>
<b>BGM Galectin 3 – automated - Label extension</b>	TBD. Identify patients at elevated risk of heart failure following a heart attack	<ul style="list-style-type: none"> <li>• 8MM post MI; 9MM ACS pts in US</li> <li>• 1.5 tests / pt / yr</li> <li>• ~25M tests / year</li> </ul>	<ul style="list-style-type: none"> <li>• \$12.5 ASP / test</li> <li>• ~\$319MM / yr US</li> <li>• + EU 50% of US</li> <li>• <b>Total = ~\$478MM</b></li> </ul>	<ul style="list-style-type: none"> <li>• Assume same as above</li> </ul>
<b>BGM Galectin 3 – automated - Label extension</b>	TBD. Identify patients who will benefit / not benefit from Crestor (rosuvastatin) treatment for lowering cholesterol and slowing plaque buildup	<ul style="list-style-type: none"> <li>• TBD</li> </ul>	<ul style="list-style-type: none"> <li>• TBD</li> </ul>	<ul style="list-style-type: none"> <li>• Assume same as above</li> </ul>

Source: Company reports and Cowen and Company estimates

### Reimbursement

BG Medicine expects to obtain an analyte specific CPT code for Galectin-3 in 2013. In the meantime, the company expects cross walk to the BMP test code (83880) to be achieved without too much difficulty based on the clinical value of galectin-3 testing. Average reimbursement for BMP testing is \$47 (thus providing about a \$30 per test cushion for partners net of payment to BG Medicine). A less favorable scenario would be cross walk to high sensitivity C-reactive protein (hsCRP) tests, which achieve reimbursement of \$14-16.

### AMI Predict

BG Medicine's product candidate with the largest potential market opportunity is AMIPredict. AMIPredict is a multi-biomarker (currently 7 proteins) blood-based test aiming to identify patients with a relatively higher risk of suffering a heart attack or stroke within the next two to four years. The potential market for a test to aid in

assessing risk of myocardial infarction (MI) or stroke in U.S. alone is significant - there are an estimated 43MM men aged 50 or over and 40MM women aged 55 or over in the U.S. who may be at risk for developing vulnerable plaques. Assuming about 10% of these patients are relatively higher risk, this equates to about 80MM tests per year in the U.S. The company's goal is complete initial 510(k) filings by year end 2011 for use on the Abbott ARCHITECT platform. The strength of AMIPredict's label will be key to determining the true market potential for this test.

#### AMIPredict – Market Opportunity Overview

	Indication	Market Opp – Volumes	Market Opp - Revenue	Economics
AMIPredict	TBD. Identify patients at high risk of near term antithrombotic event	<ul style="list-style-type: none"> <li>• 8MM individuals at higher risk for MI in US</li> <li>• 1.0 visits / pt / yr</li> <li>• ~8MM tests / year</li> </ul>	<ul style="list-style-type: none"> <li>• \$100 ASP / test</li> <li>• ~\$800MM / yr US</li> <li>• + EU 50% of US</li> <li>• <b>Total = ~\$1,200MM</b></li> </ul>	<ul style="list-style-type: none"> <li>• TBD</li> <li>• Code stacking achieves &gt;\$100 per test</li> </ul>

Source: Company reports and Cowen and Company estimates

BG Medicine - Income Statement															
(in millions)	Q1:11	Q2:11	Q3:11	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	\$54.1	\$102.0	\$158.2	295%
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	18.2	32.6	47.5	
Gross Profit	\$0.7	\$0.0	\$0.1	\$0.2	\$0.4	\$0.8	\$1.7	\$3.5	\$0.0	1.0	6.4	36.0	\$69.4	\$110.8	328%
R&D	1.7	2.4	1.9	2.8	3.2	3.4	3.5	3.6	6.5	8.8	13.7	16.6	18.4	25.3	
SG&A	2.0	2.5	3.1	4.2	5.0	5.3	5.5	5.6	8.1	11.8	21.4	24.9	25.5	28.5	
Operating Expenses	3.7	4.9	5.0	7.0	8.2	8.7	9.0	9.2	14.6	20.6	35.1	41.5	43.9	53.8	
Income (loss) from Operations	(\$3.0)	(\$4.8)	(\$4.9)	(\$6.8)	(\$7.8)	(\$7.9)	(\$7.3)	(\$5.7)	(\$14.6)	(\$20.4)	(\$28.7)	(\$5.5)	\$25.5	\$57.0	-213%
Other income (expenses)	0.1	(0.0)	(0.0)	0.5	0.5	0.5	0.5	0.5	2.6	0.6	2.0	2.0	2.0	2.0	
Pre-Tax income (loss)	(3.1)	(4.8)	(4.9)	(7.3)	(8.3)	(8.4)	(7.8)	(6.2)	(17.2)	(21.0)	(30.7)	(7.5)	23.5	55.0	
Taxes	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	8.2	19.2	
Net Income	(\$3.1)	(\$4.8)	(\$4.9)	(\$7.3)	(\$8.3)	(\$8.4)	(\$7.8)	(\$6.2)	(\$17.2)	(\$21.0)	(\$30.7)	(\$9.8)	\$15.3	\$35.7	
Shares Outstanding	12.2	19.2	19.3	19.5	19.7	19.9	20.1	20.3	3.0	17.6	20.0	20.8	21.8	22.8	
EPS	(\$0.26)	(\$0.25)	(\$0.25)	(\$0.37)	(\$0.42)	(\$0.42)	(\$0.39)	(\$0.31)	(\$6.12)	(\$1.20)	(\$1.53)	(\$0.47)	\$0.70	\$1.56	
Margin Analysis (% of sales)															
Gross Profit	82.3%	12.7%	12.7%	52.0%	58.0%	58.0%	60.0%	62.0%	4.0%	62.2%	60.7%	66.4%	68.0%	70.0%	
R&D	200.4%	1068.3%	1081.6%	694.4%	452.4%	236.3%	122.6%	64.2%	798.4%	531.3%	129.1%	30.7%	18.0%	16.0%	
SG&A	232.4%	1134.8%	1716.2%	1041.5%	706.8%	368.3%	192.6%	99.8%	989.0%	709.6%	201.6%	46.0%	25.0%	18.0%	
Operating Profit (loss)	-366.2%	-2188.2%	-2188.2%	-1807.9%	-1171.9%	-581.3%	-272.7%	-110.9%	-1783.4%	-1233.0%	-270.1%	-10.2%	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	-18.1%	15.0%	22.6%	
Growth Analysis (% y/y)															
Revenue					-17.3%	551.1%	1495.3%	1291.6%	-	102.5%	540.0%	409.9%	88.5%	55.1%	
Gross Profit									-	3024.8%	524.3%	458.5%	92.9%	59.7%	
R&D					86.8%	44.0%	80.8%	28.6%	-	34.7%	55.5%	21.2%	10.6%	37.9%	
SG&A					151.6%	111.3%	79.0%	33.3%	-	45.3%	81.9%	16.4%	2.4%	11.7%	
Operating Profit (loss)					-	-	-	-	-	-	-	-	-559.9%	123.4%	
Taxes (% of pre tax income)					-	-	-	-	-	-	-	-	-	-	
Net Income					-	-	-	-	-	-	-	-	-	-	
	Q1:11	Q2:11	Q3:11	Q4:11E	Q1:12E	Q2:12E	Q3:12E	Q4:12E	2010	2011E	2012E	2013E	2014E	2015E	
Consensus Revenue	\$0.0	\$0.2	\$0.3	\$0.4	\$0.8	\$2.1	\$4.5	\$8.6	\$8.7	\$1.8	\$16.1	\$58.7	\$115.3	\$168.0	
Growth	NM	NM	NM	NM	-9%	871%	2438%	2042%		-80%	804%	265%	96%	46%	
Actual / Cowen	\$0.9	\$0.2	\$0.2	\$0.4	\$0.7	\$1.4	\$2.9	\$5.6	\$0.8	\$1.7	\$10.6	\$54.1	\$102.0	\$158.2	
Consensus Gross Profit	\$0.0	\$0.0	\$0.1	\$0.2	\$0.4	\$1.3	\$2.9	\$6.4	NM	\$1.0	\$11.0	\$42.5	\$82.5	\$117.6	
Consensus Gross Margin	55.1%	16.7%	40.7%	46.7%	52.7%	61.0%	63.3%	74.0%	NM	58.4%	68.2%	72.4%	71.5%	70.0%	
Actual / Cowen	82.3%	12.7%	50.0%	52.0%	58.0%	58.0%	60.0%	62.0%	4.0%	62.2%	60.7%	66.4%	68.0%	70.0%	
Consensus Op. Income (Loss)	NM	-\$5.9	-\$11.3	-\$14.5	-\$8.0	-\$2.9	-\$1.4	-\$0.7	NM	-\$11.8	-\$1.3	-\$0.4	-\$0.2	-\$0.1	
Actual / Cowen	(\$3.0)	(\$4.8)	(\$4.9)	(\$6.8)	(\$7.8)	(\$7.9)	(\$7.3)	(\$5.7)	(\$14.6)	(\$20.4)	(\$28.7)	(\$5.5)	\$25.5	\$57.0	
Consensus EPS	-\$0.35	-\$0.30	-\$0.33	-\$0.36	-\$0.35	-\$0.31	-\$0.25	-\$0.11	-\$2.46	-\$1.22	-\$1.00	-\$0.07	\$0.84	\$1.54	
Actual / Cowen	-\$0.26	-\$0.25	-\$0.25	-\$0.37	-\$0.42	-\$0.42	-\$0.39	-\$0.31	-\$6.12	-\$1.20	-\$1.53	-\$0.47	\$0.70	\$1.56	

Source: Company reports and Cowen and Company



## Positives

1. High profile partnerships feed discovery, development and commercial strategy.
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.
2. Reimbursement - BGMD Galectin-3 should be able to cross-walk to CPT codes to achieve consistent reimbursement and is pursuing an independent CPT code in parallel; but there are risks to both of these.
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 likely remain high.

## Addendum

### STOCKS MENTIONED IN IMPORTANT DISCLOSURES

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.

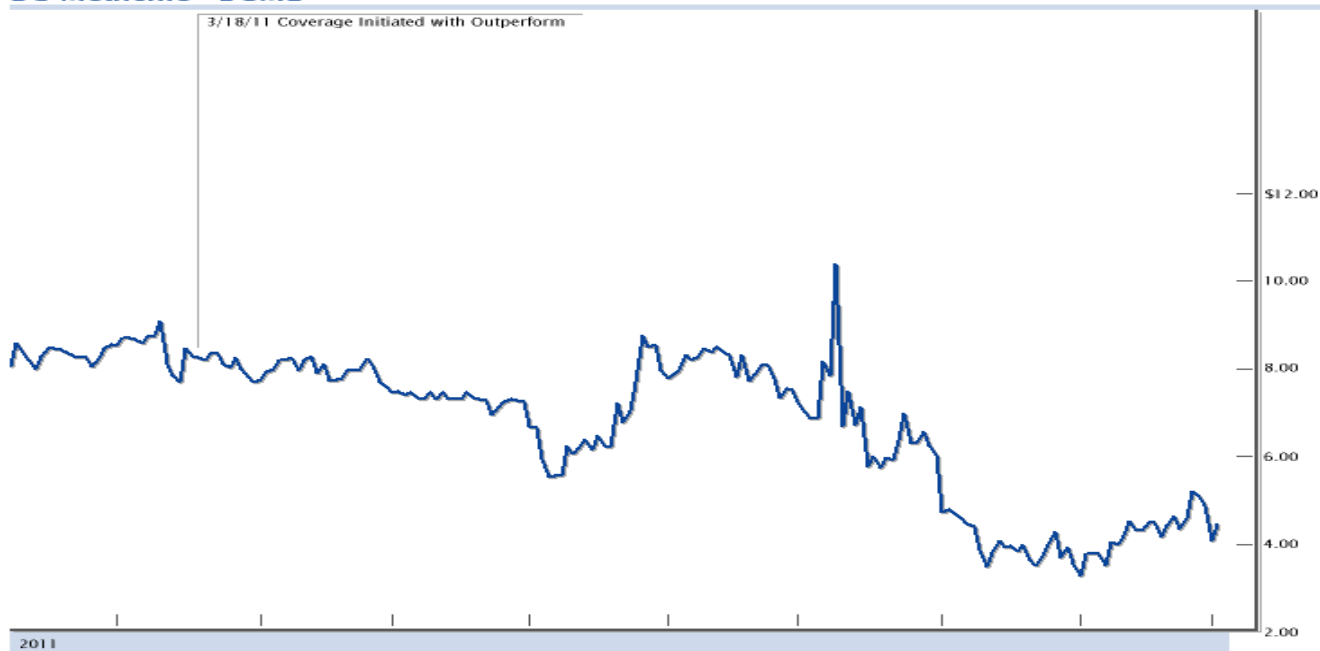
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**BG Medicine - BGMD**



Pricing data provided by Reuters America. Chart as of 11/2/11 in USD.