# Roka Bioscience

Equity Research

Initiating Coverage

August 11, 2014

**Price: $10.49** (08/8/2014)

**Price Target: $13.00**

**OUTPERFORM (1)**

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**Key Data**

| | |
|---|---|
| Symbol | NASDAQ: ROKA |
| 52-Week Range: | $13.00 - 9.15 |
| Market Cap (MM): | $190.0 |
| Net Debt (MM): | $(59.0) |
| Cash/Share: | $3.26 |
| Dil. Shares Out (MM): | 18.1 |
| Enterprise Value (MM): | $131.0 |
| ROIC: | NM |
| ROE (LTM): | NM |
| BV/Share: | $2.18 |
| FCF Yield: | NM |
| Dividend: | NM |
| Short Interest: | NM |

| FY (Dec) | 2013E | 2014E | 2015E | 2016E |
|---|---|---|---|---|
| **Earnings Per Share** | | | | |
| Year | $(1.81) | $(1.83) | $(1.42) | $(1.00) |
| **Revenue (MM)** | | | | |
| Q1 | $0.3A | $0.8A | $3.8 | - |
| Q2 | $0.7A | $1.4 | $4.7 | - |
| Q3 | $0.6A | $2.3 | $5.9 | - |
| Q4 | $0.7A | $3.3 | $7.3 | - |
| Year | $2.2A | $7.7 | $21.7 | $38.1 |
| EV/S | 59.5x | 17.0x | 6.0x | 3.4x |

# *Initiation: Emerging Disruptor in the Food Safety Testing Market*

## The Cowen Insight

With its Atlas platform now commercialized, Roka is positioned to become the standard for high-volume pathogen testing in the food safety industry, a $750MM market opportunity growing at 10% pa. Important early adopters validate the value proposition, and while patience will be required in the early going, we are enthused about the potential. Initiate Outperform with a $13 PT.

## Plenty of Tailwind Behind Food Safety Testing Industry

Supported by population dynamics (increased global demand for a safe food supply), regulatory (FSMA of 2011) and economic (cost of product recalls and outbreaks) drivers, testing of the food supply is estimated to be growing at about a 6% CAGR, with the molecular pathogen testing market, Roka's initial target, growing at >10%.

## Atlas Positioned to Become the Standard in High-Volume Pathogen Testing

Roka was spun out of Gen-Probe in 2009 to focus on food testing, and through this gained exclusive rights to Gen-Probe's industry leading automation systems and chemistries. Roka already has reached commercial stage with its flagship Atlas system and a menu of tests that cover 98% of market volume. In our view, Atlas is clearly best-in-class on automation and speed, the most important metrics to the high-volume customers Roka is targeting. Initial customers include numerous industry leaders that control a significant proportion of molecular market volume, which makes significant share capture over time seem very achievable.

## Model Appears Highly Efficient; Supports a Broader Food Safety Pipeline

Even with an active product pipeline within and beyond pathogen testing, R&D spend should remain in the $8-9MM per year range given Roka's current menu already covers the primary market opportunity. Similarly, SG&A spend efficiency appears realistic given broad S&M coverage is already built-out and this is a concentrated market. Modeled volume growth should drive steady gross margin expansion to the 50-55% range over time.

## There are Risks, but they are Outweighed by the Potential

We are positive on ROKA's target market and competitive positioning, believe the company is positioned as a disruptor in this market, and is an attractive take-out candidate. That said, it is very early in the commercial phase, this is a price-sensitive market, early performances are likely to be lumpy, and selling / implementation cycles long. We believe the potential far outweighs the risks, and are therefore initiating coverage of ROKA with an Outperform rating and a $13 PT, which equates to 4.6x our 2016 revenue forecast.

# At A Glance

## Our Investment Thesis

We view ROKA as a potential disruptor in the attractive food safety market. The company's flagship Atlas system is clearly best in class and should become the standard for high-volume food pathogen testing; early adopters validate the potential. Further, we view Roka as employing a capital-efficient model, while investing towards broader opportunities targeting the broader $2B food testing market. There are clearly risks given the early stage and lengthy selling cycles inherent to this industry, but we believe Roka represents a compelling investment on an attractive macro-investment theme (food safety), and expect shares to Outperform the market over the next 12-18 months.

## Forthcoming Catalysts

- Quarterly updates
- Incremental Atlas system placements; announcements of placements within leading sites
- Pipeline developments (Mini Atlas, non-amplied, chemical contaminants)
- Business development announcements addressing adjacent market opportunities

## Base Case Assumptions

- The pace of placements tracks in line with expectations
- The rate of utilization growth is in line with expectations
- Large customers steadily ramp volumes but without a significant inflection
- Pipeline programs progress as expected but unlikely to contribute through 2017

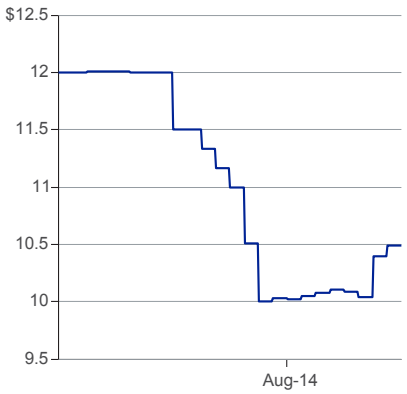
## Upside Scenario

- Regulatory market drivers / catalysts suggest accelerated market growth
- The pace of placements increases/ tracks above expectations
- The rate of utilization growth is more rapid than expected
- Large customer gains
- The pipeline begins to drive upside in 2015-2016
- Partnerships expand commercial reach

## Downside Scenario

- The pace of placements slows / tracks below expectations
- The rate of utilization growth is slower than expected
- Large customer losses
- Key pipeline programs stall

## Price Performance




Source: Bloomberg

## Company Description

Roka Bioscience is a molecular testing company initially focused on the detection of foodborne pathogens, the fastest growing segment of the $2B food safety testing market. Roka was spun out of Gen-Probe in 2009, and through this acquired exclusive rights to core Gen-Probe technologies for industrial markets applications. This allowed Roka to relatively quickly and cost efficiently reach commercialization. Roka's Atlas platform is a "sample to answer" solution and addresses significant performance gaps that traditional pathogen detection methods have with respect to accuracy, time to results and automation.

## Analyst Top Picks

| | Ticker | Price (08/8/2014) | Price Target | Rating |
|---|---|---|---|---|
| Genmark Diagnostics | GNMK | $11.18 | $15.00 | Outperform |

## Investment Thesis

Our constructive stance on ROKA shares starts with our positive view of Roka's targeted end market – food safety testing. We estimate that the molecular pathogen testing market is growing at a 10% CAGR with the impact of structural regulatory reform (Food Safety Modernization Act of 2011) as an incremental catalyst over the next several years. With this market backdrop, we believe Roka is positioned to become the standard for high-throughput food pathogen testing through what is almost an "unfair" competitive advantage based on the ability to leverage the hundreds of millions of dollars invested by Gen-Probe into its industry-leading molecular infectious disease detection technologies. With its key Atlas system and assay menu that covers 98% of market volumes commercialized, Roka is already de-risked from a technical development perspective. Further, we view Roka as employing a capital-efficient model whereby only relatively modest increases in R&D and SG&A are likely to be required for the company to execute on its strategy, inclusive of an exciting pipeline targeting the broader $2B food testing market. There are clearly risks given the company is very early in its commercial phase and this market is known as price sensitive and prone to lengthy selling cycles (and there will be quarter to quarter lumpiness), but we believe Roka represents a compelling investment on an attractive macro theme (food safety) that is well positioned to gain a prominent market position.

We are initiating coverage of ROKA shares with an Outperform rating and a $13 price target, which implies 4.6x our 2016 revenue estimate, which is a slight premium to the median of a peer group of higher growth testing product companies (CPHD, NEOG, ABAX, QDEL, GNMK).

## Investment Highlights

### Strong Underlying Dynamics in Food Safety Testing

We view the food safety market, and more specifically the food pathogen testing market, where Roka is initially focused, as attractive. At a high level, global demand for a high quality food supply is growing do to demographics, specifically with regard to growth in the middle class, and food testing as a key component of this is being catalyzed by economic and regulatory drivers within the US and beyond. We estimate that these drivers will support a global market growth rate for foodborne pathogen testing of about 6% through 2017, with the molecular segment of the market in which Roka participates, growing at about a 10% rate.

### De-Risked on Technical Development of Key Platform…

Roka is unique as an emerging molecular testing company in that it already has achieved commercial stage with its key platform, Atlas, as well as with a menu that covers 98% of market volumes (Listeria, Salmonella, E.coli). These advantages are a result of Roka's genesis as a spin out from Gen-Probe who had spent hundreds of millions of dollars in the development of the fundamental amplification and detection chemistries and automation systems Roka now has exclusive rights to, supported by exclusive intellectual property licenses and supply agreements with Gen-Probe.

### …With a Platform Already Recognized as Best in Class in MDx; Validation through Early High-Profile Customer Adoption

From a risk and capital requirement perspective, having reached commercial stage with its key platforms is already a significant plus, but beyond that, the Gen-Probe chemistries and Panther system that Roka markets for the food testing market as Atlas, are already viewed as best-in-class, in our opinion, for molecular infectious disease testing in the clinical testing market; recognized for its ease of use, speed, and robustness. These attributes resonate at least as much in the food testing market, and this has gained validation as Roka Atlas has seen uptake in some of the largest and most influential food testing labs in the world, including Silliker, Marshfield, General Mills, and leading global beef and poultry processors. Our discussions at the recent International Association of Food Protection meeting supported our view that Atlas is well positioned to become the standard for high-volume pathogen testing in the food industry.

### Capital Efficient Model

We believe Roka can execute on its strategic plan and capture a significant portion of the foodborne pathogen testing market with a relatively capital efficient model. We believe annual R&D spend will remain under about $9MM ($7.6MM in 2013) as spending on the initial platform is transitioned to several key pipeline initiatives. In SG&A spend, we model a relatively modest ramp from $17.5MM in 2013 to about $28MM in 2018 as we view the current commercial infrastructure as close to full coverage for the US market, and we expect OUS opportunities to be primarily addressed through partnerships. Further, as our forecast reflects the spending on pipeline opportunities yet does not include revenue from these potential sources, we see significant leverage potential in our ROKA model.

### Multiple Unmodeled Sources of Upside

While we view the market for the Atlas platform and existing menu of assays in the US alone as attractive given market dynamics and Roka's competitive positioning, and include only these sources in our formal revenue forecasts, we note that Roka's opportunities outside the US, as well as beyond the current menu with Mini-Atlas and non-amplified versions of its tests, and beyond pathogen testing in indicator organism testing, all opportunities expected to be addressed through products in development with commercialization timelines by 2017, as potentially significant sources of upside to our forecasts, and significantly incremental to Roka's TAM.

### Attractive Profile as an Acquisition Target

We view ROKA as an attractive acquisition target given it is a rapidly emerging player with a potentially disruptive platform, in a market with strong fundamental growth dynamics, currently dominated by very large companies (DuPont, 3M, Life/Thermo Fisher, BioMerieux, Bio-Rad), several of which are in need of a new product cycle.

## Investment Risks

### It's Early in the Commercial Launch

While having development de-risked is a clear positive, and recent trends, including gaining some important customer wins are encouraging, Roka is very early in its commercial launch. Based on projected Q2:14 results, the company is on a $5.5-6.0MM annualized revenue run rate with an installed base of less than 40 systems. While management notes that visibility into the placement and utilization outlook is improving, and the management team has significant experience with launching products into this market, there is simply a limited history to go on with Roka.

### Selling Cycles are Long; Quarters Likely to be Lumpy

When aiming to drive adoption of a piece of capital equipment with potentially profound implications on logistics, workflow and economics, selling cycles can be lengthy and placement trends can be lumpy from quarter to quarter, and this is no different with Roka. For the higher volume customers Roka is targeting initially with Atlas, changing pathogen testing platforms is a significant undertaking, from evaluation through implementation, and can take several quarters to a year or even longer. Even post initial implementation, it can take larger customers several additional quarters to ramp their utilization to full potential. Consistently, it is not uncommon that system placements can slip from quarter to quarter. We believe this dynamic has the greatest implication on the revenue forecast with regard to system utilization expectations, which is a key metric for this razor /razor blade model, and while the consistency of utilization tends should improve over time, we highlight it as a risk investors should be aware of. As a positive byproduct of this, we believe this process leads to an extremely "sticky" customer base.

### Market is Price Sensitive, and May be Difficult to Perform Primary Diligence On

While greater conviction in a safer food product is ultimately what food producers and processors are aiming for, pathogen testing is still viewed as a cost center. As such, our consultants consider this market very price sensitive, but also note that Roka appears very well positioned to gain share rapidly in this market through its ease of use, automation and time to result advantages, which clearly have significant and tangible value for customers. As an important aside, we note that because Roka's primary customers are commercial organizations, the investment community may find it difficult to perform primary diligence on the market dynamics and trends.

### Valuation Needs to Look out Several Years

There is clearly significant value in Roka's commercial system and assay menu, its agreements with Gen-Probe, and its early [customer] accounts, but valuing the company on a EV/sales multiple basis, which we believe is the way most investors evaluate a company of this profile, realistically requires looking forward to at least 2016 projected revenue to arrive at a reasonable basis of comparison. While we believe our revenue forecasts through at least 2016 are supportable with real upside potential, a material amount of risk to the revenue ramp outlook, and therefore the valuation, will remain.

### Competition in Pathogen Testing has Inferior Technology, but Have Much Deeper Pockets

Based on our market diligence, we are confident that Roka has the best platform for higher volume foodborne pathogen testing and is well positioned to displace existing players DuPont, 3M, Life Technologies / Thermo Fisher, bioMerieux, BioControl, and Neogen. That said, these incumbents are all significantly larger and have considerably more resources than Roka, which could allow them to "win" with an inferior product, by way of aggressive pricing or "bundling". That said, we believe the early commercial traction is a strong indication that Roka's advantages are extremely compelling even in situations where the larger competitors have gotten aggressive.

### Early Revenue Concentration

Perhaps not unexpected for a company at this stage specifically targeting high volume accounts, Roka does currently have a significant amount of revenue concentration at a few key customers. For 2013, Marshfield Food Safety and MVTL Labs together accounted for 61% of Roka's revenue. H1:14, we believe these two customers in addition to Silliker and PrimusLabs accounted for ~80% of company revenue. While this is a risk, we believe these are impressive early customers for Roka and while there are no long term contracts binding these customers to Roka and its products, we view the customer base as a "sticky" one given the complexities of bringing new systems on-board.

## Company Overview

### Company Summary

Roka Bioscience is a molecular testing company initially focused on the detection of foodborne pathogens, the fastest growing segment of the $2B food safety testing market. Roka was spun out of Gen-Probe in 2009, and through this acquired exclusive rights to core Gen-Probe technologies for industrial markets applications. This allowed Roka to leverage the hundreds of millions of dollars invested by Gen-Probe over the years towards the development of a market leading molecular diagnostics platform, and to allow Roka to relatively quickly and cost efficiently reach commercialization. Roka's Atlas platform is a "sample to answer" solution and addresses significant performance gaps that traditional pathogen detection methods have with respect to accuracy, time to results and automation. While in the early stages of commercialization, initial customers include key opinion leaders in food safety testing, such as leading contract testing labs, well-known food processors and government agencies, which bodes well for the differentiated attributes of Roka's solutions, and vast commercial potential.

### Key Products: Atlas System and Atlas Detection Assays

#### System

Roka's Atlas instrument is a fully automated molecular diagnostic testing instrument designed to reduce labor costs and operator error in high-volume foodborne pathogen testing laboratories. The Atlas instrument eliminates the need for batch processing and automates all aspects of molecular diagnostic testing on a single, integrated platform. Atlas is essentially a rebranded Gen-Probe PANTHER molecular diagnostic system. The Atlas instrument's key advantages are described below:

*Throughput and Flexibility*— Atlas instrument is high throughput; a single operator can process up to 300 tests per eight-hour shift and up to 500 tests per 12-hour shift. Multiple assays can be processed concurrently from a single sample. Continuous access sample loading eliminates the need to batch samples and enables optimized workflow and enhanced laboratory efficiency.

*Workflow*— Atlas is "sample to answer". Processing tests on the Atlas instrument requires approximately 19 manual touches. Instrument operators require minimal training to run the instrument and a trained operator can easily oversee the operation of two systems at the same time. The Atlas instrument has the flexibility to connect to customers' laboratory information management systems.

Figure 1 The Roka Bioscience Atlas System


Source: Company reports and Cowen and Company

### Assays and Consumables

Roka's current menu for the Atlas system includes tests for Salmonella, Listeria, E. coli O157:H7, Shiga toxin-producing E. coli and Listeria monocytogenes. These tests have been AOAC-certified across a wide variety of sample types, sample sizes, enrichment media and dilution factors. Importantly, this menu covers 98% of market-wide pathogen detection volume.

Atlas is a "closed" system – Atlas Detection Assays and consumable supplies are designed to be used only on Atlas instruments and the Atlas instruments will only accept Atlas Detection Assays and consumable supplies.

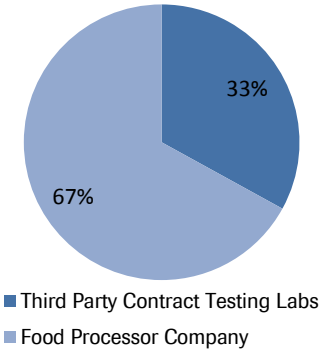
### Target Customers

Roka is focused on the food safety testing market, initially, specifically for pathogen testing. This testing is performed by contract testing labs (aka third party labs or reference labs) and food producers and processors. Examples of prominent contract testing labs among Roka's initial adopters include Silliker (part of Merieux group), Marshfield Food Safety, PrimusLabs, and MVTL Laboratories. Examples of food processors among Roka's initial adopters include General Mills and leading global poultry and beef processors. In addition, regulatory / policy institutions such as the US Department of Defense Food Analysis and Diagnostics Lab are also among the early adopters of Roka's Atlas system.

It is estimated that there are about 700 contract labs in North America which process about 1/3 of market test volume (high volume labs). The other 2/3 of market volume is processed by labs within food producers and processors, of

which there are thousands in the US alone, potentially up to 40,000 globally (food plant labs). Our consultants note a clear trend towards more "outsourcing" of testing by processors to contract labs, in large part due to the increasing complexity of food testing regulations. This market is viewed as quite centralized, however, such that management estimates that there are likely 300-400 contract lab locations in North America that perform more than about 100 molecular tests per instrument per day. This number could be closer to 1,500 globally, according to our consultants. Roka's commercial strategy is to initially target higher volume testing food processors and commercial testing labs; those who typically perform over 75-100 molecular tests per day.

Figure 2 Testing Location Breakdown by Volume in 2013 – Total ~67MM tests in North America




Source: Company reports and Cowen and Company

## Revenue Model

Roka derives the vast majority of its revenue (>95%) from the sales of consumables (kits and reagents) for use on the Atlas system, with very little generated from cash purchases of the instrumentation (generally this is a reagent rental business). Therefore, this is a classical razor/razor-blade model. Revenue is also generated from service maintenance contracts.

In reagent rental agreements, Roka recovers the cost of providing the Atlas instruments, including services related to instrument maintenance, repairs, installation and training to customers, in the amount charged for the Atlas Detection Assays. The reagent rental agreements are typically for one-year periods and have no minimum purchase obligations.

## Distribution

Roka has about a 20-person direct sales team in the US that is currently composed of strategic account managers, technical sales specialists and field applications specialists. The sales team is supported by a 4-person customer service organization, which assists customers with internal comparative methods and verification studies for the Atlas Assays, supports the installation and maintenance of the Atlas instrument and provides technical proficiency training for operators of the Atlas instrument.

## Manufacturing

### Instrument

The Atlas instrument is sourced through Gen-Probe. Under the terms of the long-term supply agreement between Roka and Gen-Probe, Roka provides Gen-Probe a forecast and Gen-Probe delivers the instruments Roka orders from them consistent with Roka's forecast. Gen-Probe subcontracts system manufacturing to Stratec, to produce the Atlas instrument, which Gen-Probe receives from Stratec and then delivers to Roka. Gen-Probe / Hologic purchases its Panther instrument for clinical diagnostic testing from Stratec and this is the same instrument that Roka commercializes as Atlas.

### Consumables / Test Kits

Roka manufactures and assembles its assay kits, assay calibrators, universal fluids, and transport tubes and ancillary reagents in its facility in San Diego. Atlas universal reagents and ancillary disposables are purchased from Gen-Probe, which are re-labeled for Rokas.

## Regulatory Process

For commercial marketing, Roka's assays do not require government approval in the US. That said, most food processors and testing laboratories require validation by an independent third party prior to adopting a new testing method. In the US and many international markets, food processors and third-party testing laboratories require testing methods to be certified by the AOAC Research Institute as a Performance Tested Method, or AOAC PTM, which demonstrates that the method meets the manufacturers' performance claims. Methods are validated against a reference standard, such as the FDA's Bacteriological Analytical Manual, or BAM, the USDA-FSIS's Microbiology Laboratory Guidebook, or MLG, or other international standards such as the International Organization for Standardization, or ISO; the reference method is generally culture-based.

To obtain AOAC certification, a company typically performs internal and external studies to validate that its methods perform according to documented claims. Then, a company submits its validation data to the AOAC for peer review. If the peer reviewers concur on their recommendation to approve, the Research Institute then grants AOAC Performance Tested certification for that method. The certification process often takes 6-9 months, but can vary considerably. Roka has already obtained AOAC PTM certifications for a wide variety of sample types, sample sizes, enrichment media and dilution factors for its assays. In addition, Roka has performed numerous method comparison and verification studies to confirm the performance of their assays in customer specific food matrices. We note that most customers require a much more extensive validation process than what is required to obtain AOAC certification.

## Agreements with Gen-Probe

In connection with the company's spin out from Gen-Probe in 2009, Roka and Gen-Probe entered into a license agreement with Gen-Probe; this has subsequently been revised and a supply agreement for both systems and consumables have been formalized.

### License

Roka has from Gen-Probe a worldwide, royalty-bearing license covering Gen-Probe's molecular diagnostic technology patent portfolio and know-how (including technology, trade secrets, inventions, methods, designs, materials, and data) for use in instruments for the following industrial testing applications: food manufacturing, water testing, biopharmaceutical manufacturing, environmental, veterinary, bioterrorism and infection control.

Pursuant to this license, Roka is obligated to make royalty payments to Gen-Probe based on net sales of products that incorporate the licensed Gen-Probe technology. We believe that the original royalty rate was in the low double digits but expect that this will be bought down to below 4% as a go forward rate. For the renegotiated royalty rate, Roka paid Gen-Probe / Hologic $8MM cash and 865K shares of ROKA stock, upon execution of ROKA's IPO.

### Supply Agreements

#### *Instruments*

A long-term supply and purchase agreement was signed between Roka and Gen-Probe in May 2011. In this agreement, Gen-Probe supplies Roka with its Panther system at defined transfer prices based on a quarterly rolling forecast from Roka of its anticipated needs for instruments for the next 12 months. This agreement expires on May 27, 2018 with automatic renewals for successive 2-year periods, unless either side provides at least a one year notice of its intent not to renew the agreement.

#### *Consumables / Test Kits*

Also under a long-term supply and purchase agreement, Gen-Probe is obligated to supply Roka with a number of proprietary reagents that Roka uses as components in the manufacture of its assays, bulk universal reagents, and certain proprietary disposable components used to run the pathogen detection assays. Roka pays Gen-Probe a certain transfer price for each of the individual materials supplied under this agreement. The initial term of this agreement expires on May 27, 2018 with automatic renewals for successive 2-year periods, unless Roka gives 180 days notice of its intention not to renew.

## Market Opportunity

### Food Safety is a Major Global Public Health and Economic Issue

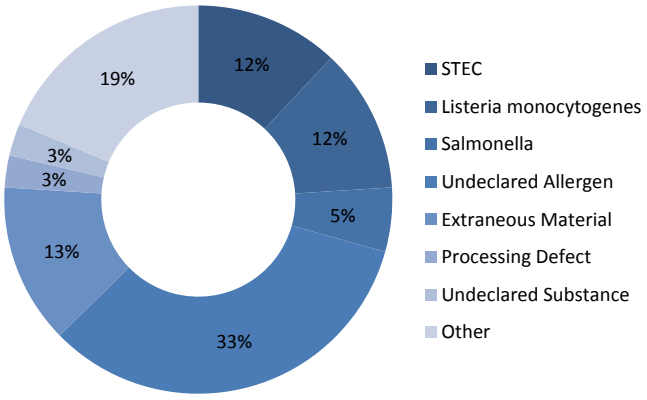
Foodborne illnesses are a major problem in the developed and developing world. The CDC estimates that, in the US, foodborne disease causes almost 50MM illnesses annually, 130K hospitalization and 3K deaths. Further, 1 in 3 individuals in industrialized countries are estimated to be affected by foodborne disease, and over 2B people are estimated to suffer from food and waterborne diseases, annually. Foodborne illnesses result in economic damage to industry (direct and indirect costs), households (medical costs, productivity), and to public health.

**Foodborne Disease Outbreaks and Product Recalls Remain Common, Highlighting Need for Risk Prevention in the Increasingly Global Food Supply…**

While the US is viewed as having a relatively sophisticated food safety infrastructure, based on data from FDA, CDC and USDA, there were well over 500 food product recalls in 2013. A food recall occurs when there is reason to believe that a food may cause consumers to become ill. A food manufacturer or distributor initiates the recall to take foods off the market. In some situations, food recalls are requested by government agencies (USDA or FDA).

As shown below, USDA data shows that 25-30% of these were due to E. coli, Listeria or Salmonella, 33% were due to undeclared allergens (major food allergens include: milk, egg, peanut, soy, fish, crustacean shellfish, wheat and tree nuts).

Figure 3 Causes of Food Recalls in the US in 2013




Source: USDA and Cowen and Company

The continued emergence of foodborne disease outbreaks suggests there remains a need for food safety protocols that make risk assessment and prevention the key goals, which was a major consideration in the development of the FSMA of 2011, discussed later in this report.

**…and have Significant Economic Consequences, Directly and Indirectly**

The cost of a recall is significant for food producers and processors, commonly over $10MM per recall, and that is if there is little to no public health impact. The cost of a foodborne-disease outbreak (an incident in which two or more persons experience a similar illness resulting from the ingestion of a common food) can be far more expensive and even catastrophic. The table in figure 4 summarizes some of the most significant foodborne outbreaks in the US over the past 10 years, and associated expenses reached over $1B in at least one case involving a Salmonella outbreak in peanut butter. In many of these examples, at least one supplier in the supply chain was forced out of business, either from legal liabilities or because a major customer was lost as a result.

Our consultants stress that focusing on direct costs, however, vastly underestimates the true impact of food recalls and outbreaks in that a company's brand is its most important asset, and history is replete with brands and businesses being destroyed because of a lapse in food safety. While this remains an evolving mindset, our consultants believe more and more producers and processors are viewing implementation of comprehensive and holistic food safety programs as a wise investment for reducing risk by protecting health and the company's brand (i.e. not just cost avoidance); the emergence of social media as a tool for public awareness and sentiment to be quickly influenced only magnifies these dynamics. Economics related to avoiding food product recalls and outbreaks, and the increased public awareness of food safety issues, are clearly important drivers for the markets Roka serves, aside from regulatory requirements, discussed below.

Figure 4 Most Significant Food Microbiological Outbreaks in the US 2004-2013

| Year | Outbreak | Description / Implications |
|---|---|---|
| 2013 | Cyclospora cayetanensis in salads, cilantro | - U.S. largest Cyclospora outbreak in the past decade<br>- 631 cases in 25 states<br>- Mixed salads; imported fresh cilantro |
| 2012 | Norovirus from food handling | - Buffet-style restaurant; due to 31 sick food handlers<br>- 344 cases (282 primary + 62 secondary cases)<br>- No single food was ever linked to the incidence |
| 2011 | Listeria monocytogenes in cantaloupe | - 28 states; 146 cases and 36 deaths (2nd deadliest outbreak in U.S.)<br>- Contaminated farm equipment, water,, and conveyor belt<br>- Entire crop of 300,000 cantaloupes recalled |
| 2010 | Salmonella Enteritidis in shell eggs | - Largest egg recall in U.S. history: >550MM eggs<br>- Eggs were sold to distributors in 22 states and Mexico<br>- Companies knew that houses and carcasses were contaminated |
| 2009 | Salmonella in peanut butter | - Bankruptcy of the peanut butter company<br>- 46 states, 714 cases; >2,833 products affected<br>- US DoJ filed a 76-count criminal indictment of company officials |
| 2008 | Salmonella in hot peppers | - 1,442 cases, 43 states and Canada<br>- First misidentified source as tomato causing losses in tomato industry of >$100MM in Florida and almost $14MM in Georgia |
| 2007 | Salmonella Tennessee in peanut butter | - 425 cases<br>- Faulty roof of manufacturing facility, allowed moisture into production<br>- Company spent $25MM in connection with the investigations |
| 2006 | Escherichia coli O157:H7 in spinach | - 205 confirmed cases (31 cases of HUS) with 3 deaths in 26 states<br>- E. coli contamination in cattle fields nearby spinach fields<br>- $350MM sales losses of U.S. spinach industry |
| 2005 | Hepatitis A virus in green onion | - 555 cases, 128 hospitalizations and 3 deaths<br>- Green onions at a restaurant in Pennsylvania; restaurant was closed<br>- >9,000 persons received IG against hepatitis A virus |
| 2004 | Listeria mono in deli meat & hot dog | - 24 states; 108 cases with 14 deaths and 4 miscarriages<br>- 35MM lb product recall ($76MM value)<br>- $4.4MM fine sentenced for selling adulterated meat |

Source: Cowen and Company

## The Food Testing Market

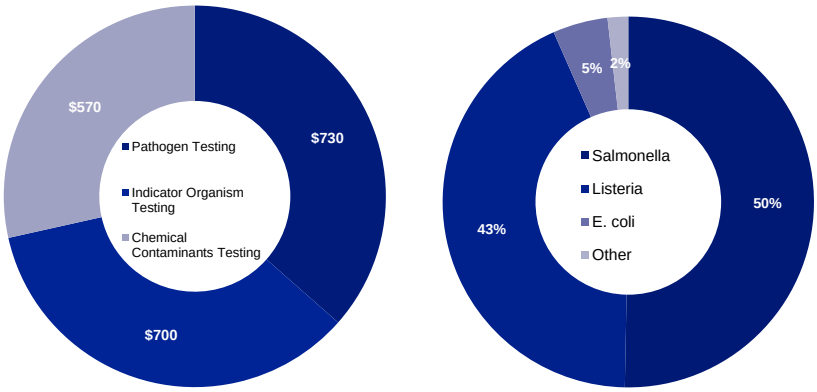
The global food safety testing market is estimated to approximate about $2B in size. This estimate is comprised of three distinct testing segments for foodborne contaminants:

(1) Pathogen testing; the detection of disease-causing microorganisms, primarily bacteria, or pathogens, such as *Salmonella*, *Listeria*, *E. coli* O157:H7, Shiga toxin-producing *E. coli* and *Listeria monocytogenes*

(2) Chemical Contaminants Testing - the detection of chemical contaminants such as allergens, mycotoxins and drug residues

(3) Indicator Organism Testing - the detection of organisms that are not inherently pathogenic, such as coliforms, yeast and molds

**Figure 5 Components of ~$2B Global Food Testing Market (Left); Pathogen Testing Segment Market Volume Breakout by Pathogen (Right)**




Source: Company reports and Cowen and Company

## ROKA Initially Targeting $730MM Pathogen Testing Segment

Roka is initially focused on the pathogen testing segment of the food safety testing market. As reflected in figure 6, by far the most commonly tested foodborne pathogens are *Salmonella*, *Listeria*, *E. coli* O157:H7, Shiga toxin-producing *E. coli* and *Listeria monocytogenes* which could comprise 98% of the pathogen testing volume performed by food processors and contract testing laboratories. Roka estimates global market volume at 167MM in 2013 with about 40% of this being done in the US.

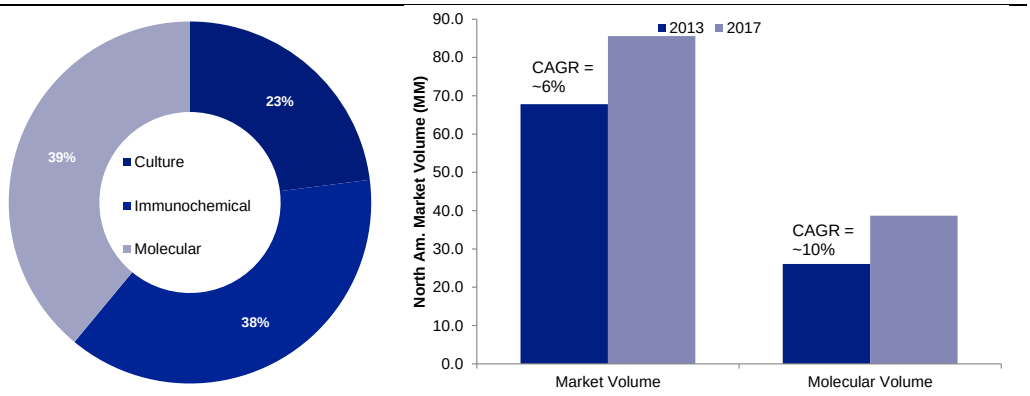
### *Molecular Testing the Fastest Growing Subsegment*

Pathogen testing includes culture-based methods, immunochemical and molecular-based methods. It is estimated that about 38-40% of the 67.8MM pathogen tests performed in North American are performed using molecular platforms; 23% by culture and 38-40% by immunochemical platforms.

Overall, market-wide pathogen testing volumes are forecast to grow at about a 6% CAGR through 2017, driven by the economic and regulatory drivers discussed earlier, and consumer demand for safe food. As in many segments of human

molecular diagnostics, growth rates differ materially by testing platform. We view the foodborne pathogen testing market as ripe for technological evolution from culture and immunoassays to molecular methods due to the workflow (ease of use) and time to result advantages, and accordingly, we forecast molecular volumes to be growing at about a 10% CAGR through 2017.

**Figure 6 Pathogen Testing Market Segment by Testing Method (Left); 2013 and 2017E Market and Molecular Volume Estimates**




Source: Company reports and Cowen and Company

## Value Proposition and Competitive Differentiation

The metrics that customers find most important when considering their pathogen testing options can vary considerably, but based on discussions with our food testing consultants, we believe labor costs, automation, and time to result are the metrics most commonly prioritized for Roka's initial target market (and these are interrelated). Test performance is clearly important as well, but our consultants view this as a metric customers often characterize as a must have, and therefore not a distinguishing feature, at least when comparing molecular testing options. In terms of cost, there is an appreciation for viewing economics through a "total value analysis" but clearly the market is price sensitive given food testing is viewed as a cost center in the process of food production.

### Current Testing Paradigms and Pain Points

Traditionally, the key challenges presented by foodborne pathogen testing relate to: (1) sensitivity requirements (often need to find the equivalent of one bacterial cell in a 25-375 gram sample); (2) complexities related to working with various sample matrices (vegetable, meat, dairy, herbs, etc.); and (3) workflow requirements (fit with staffing hours, level of complexity, samples validated for, time to result requirements, etc.). Factors 2 and 3 are also related to the likelihood of errors, which has important economic implications as well.

Pathogen testing can be performed by culture, immunodetection or molecular approaches. While culture remains the reference method or "gold" standard from a performance perspective, its technical complexity and slow time to result has resulted in a market evolution towards immunodetection and molecular approaches over the years. Immunodetection, relative to culture, produced a faster time to result and simpler workflow, but in some cases these came with an increase in false negative and false positive results.

Figure 7 Comparison of Pathogen Testing Options

| Method | Characteristics | Limitations | Players |
|---|---|---|---|
| Culture | • Generally Accurate<br>• Inexpensive test kits | • Labor intensive<br>• 3-5 days time to result | • bioMerieux, Becton Dickinson |
| Immunochemical | • Typically faster than culture methods | • Labor intensive<br>• 2-3 days time to result<br>• False (+) and false (-) increase | • bioMerieux, duPont, 3M, Neogen, Bio-Rad |
| **Molecular (pre-Roka)** | • **Typically faster than immunochemical methods** | • **Labor intensive, with complex workflow**<br>• **Impacted by inhibitors, cross reactors** | • **DuPont, 3M, Neogen, BioControl, Bio-Rad, Thermo Fisher** |

Source: Cowen and Company

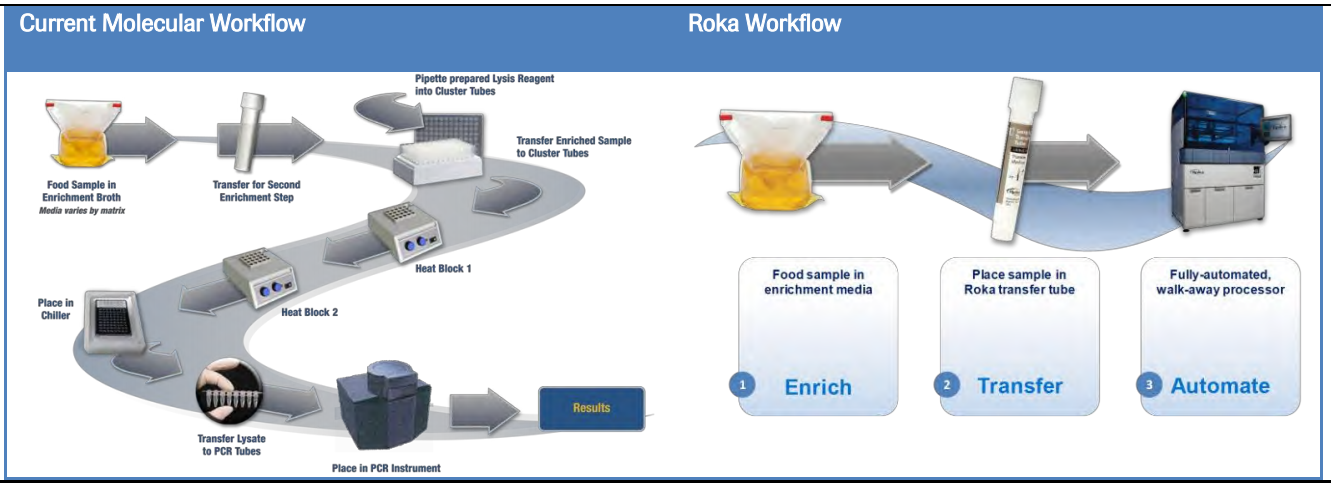
When DuPont introduced molecular pathogen testing to the market, the advantages of molecular testing with regard to its amenability to automation and potentially greater sensitivity, became appreciated, and this catalyzed a relatively rapid evolution towards molecular pathogen testing. Over the years, molecular approaches have become the common testing platforms for the higher throughput market segments and multiple vendors have entered.

### How Atlas Changes the Paradigm – Why It's Better

As noted in figure 6, currently about 40% of the global pathogen testing market by volume is based on molecular testing methods. While this clearly suggests molecular testing has seen significant adoption in the food testing market, there remain significant "gaps" with regard to current molecular testing options. As noted, we view the most important metrics to customers in the pathogen testing market as labor costs, automation, and time to result, which are important drivers of a platform's economics, and these are the gaps being addressed by Roka.

Figure 8 Summary of Roka's Value Proposition

| | Food Producer/Processors | Contract Testing Labs |
|---|---|---|
| **Accuracy** | • Reduce operational costs in the plant of false positive test results<br>• Reduce product liability risks for the company due to false negative test results | • Improve customer satisfaction with fewer unconfirmed false positive test results<br>• Reduce potential liability for the delivery of inaccurate pathogen test results due to lab error |
| **Speed** | • Reduce working capital needs as a result of shorter product release times<br>• Support a longer shelf life for perishable products such as meats; produce | • Improve customer satisfaction by providing faster time to test results from sample receipt<br>• Reduce overtime and extended work shifts with faster time to test results |
| **Automation** | • Reduce direct labor costs and operator training requirements<br>• Flexible, scalable and efficient testing workflow | • Reduce direct labor costs and consolidate testing on fewer instrument platforms<br>• Enable higher volume throughput with existing laboratory infrastructure and staff |




Source: Company reports and Cowen and Company

### Workflow

Workflow is of critical importance as it is a key determinant of both a platform's direct economics based on hands on time requirements, ease of use, etc. as well as a platform's performance as this is in part related to the likelihood of operator error. As reflected in the schematics in figure 8, current molecular workflows can require up to 40 process steps and up to about 30 manual "touches" per sample. With Roka, the process is far simpler in number of steps and operator hands on requirements.

Therefore, Roka's Atlas system and assays can enable higher throughput with reduced labor costs, reduced training requirements, improved accuracy through reduction of operator error because of its superior automation and workflow.

### Speed

Time is money in the food testing world. Many products are held to "test and hold" requirements, which mandates that certain food products are kept out of commerce until the results of tests for potentially harmful contaminants (pathogens, drug residues) are received (working capital impact); these include a variety of beef and poultry products. Other fresh perishables including fruits and vegetables need to be tested almost immediately to not significantly negatively impact their commercial value (longer shelf life). Suffice it to say, time to result, with compromising performance, is a critical metric in this industry.

While third party comparison studies are not yet available, Roka research suggests its Atlas Listeria test has a 27 hour time to result versus 44 hours for current commercial PCR methods. In Salmonella, the comparison is 19 hours versus 29 hours, in favor of Roka.

### Performance

While workflow and speed are important differentiators, this cannot come at the expense of performance. Further, another complexity in food testing is that test performance must be reliable regardless of the sample type, of which there can be dozens.

Across almost 2,300 samples analyzed across almost 60 sample matrices using Atlas for AOAC RI Certification Studies, the total false positive rate was <1% and total false negative rate was 2.1%. These data were similar in separate studies comparing Roka's Atlas and commercial molecular PCR assays for Salmonella and Listeria (n=580 samples across 15 different matrices) with culture, whereas the molecular PCR assays in this study resulted in a total false positive rate of >3% and total false negative rate of >18%.

### Economics

On a direct consumables price per test basis, we believe immunodetection pathogen assays approximate $5, current molecular assays about $7, with Roka at $8-9. As noted, this as an extremely price sensitive market, but our consultants do note that customers (at least the higher volume ones Roka is initially targeting) understand that a rigorous analysis of the economics of a platform must include a consideration of workflow, hands on time requirements, error rates, etc. To make a more sophisticated pitch on the economic advantages of the Atlas platform, Roka performs a Total Value Analysis for its potential customers to demonstrate the

impact of Atlas on the customer value stream, which has the potential beneficial byproduct of positioning Roka as a high value consultative partner.

Below is an example of one aspect of a Total Value Analysis demonstrating how key metrics related to Salmonella testing compare before and after potential Atlas Salmonella test implementation. This analysis argued that Roka's approach resulted in a $1.70-2.66 per sample direct labor savings, and significantly reduced the potential for error. Additional indirect savings and benefits of Atlas included in a Total Value Analysis would include: decreased confirmatory testing, decreased cost of rerunning samples, decreased employee training time, decreased risk management costs, cost and time benefits for customers submitting samples and the potential for additional revenue associated with increased test volume (for third party labs).

Figure 9 Example Total Value Analysis Output – Pre and Post Atlas Implementation

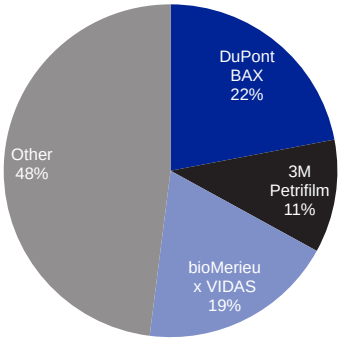
| | DuPont BAX | Roka Atlas | Percent Decrease |
|---|---|---|---|
| **Cycle Time** | 31.7 hours | 15.1-27.1 hours | 15-52% |
| **Labor Time per Sample Salmonella** | 10.6 minutes | 6.2 minutes | 42% |
| **Process Steps** | 15 | 10 | 33% |
| **Touches per Sample** | 41 | 14 | 66% |

Source: Company reports and Cowen and Company

### Additional Thoughts on the Competitive Landscape

On the metrics we note as most important for the higher volume food pathogen testing customer, we view Roka's Atlas as best in class, but we provide more specific thoughts on the competitive landscape below.

Figure 10 2013 Pathogen Testing Revenue Share by Brand




Source: Company reports and Cowen and Company

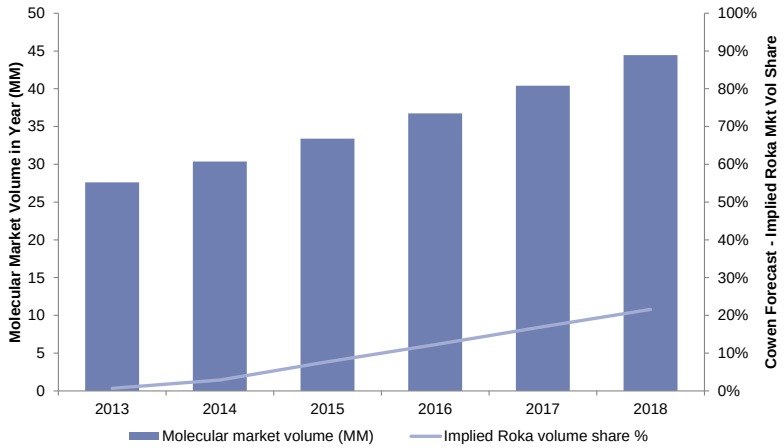
Within molecular, we believe DuPont and its BAX system has the largest existing installed base for Roka to target (potentially ~1,000 system installed base). Our consultants also believe that while DuPont is a very large company to attempt to displace that it may be good timing for Roka to gain share against them because there is a view among many customers that DuPont lost its focus on the food testing market following a restructuring several years ago and because the BAX product line may be getting a big stale. Biocontrol seems to have gained decent

traction as well with its Assurance GDS platform, and has recently released some improved versions of its pathogen assays, but does not appear significantly differentiated on key metrics, notably with regard to automation and throughput. We believe Bio-Rad and Neogen are both gaining some traction in the market; Bio-Rad with its IQ-Check line of real time PCR assays and automation solutions, and Neogen with its products across a few different technological lines (ANSRs and GeneQuence in molecular, Reveal Lateral Flow in immunodetection) that are really targeted at lower volume customers. We view 3M as less of a meaningful competitor in the molecular segment although they do participate through the 3M Molecular Detection System. We view bioMerieux as one to keep an eye on in this market. While we do not believe the company has an integrated, highly automated molecular platform for higher throughput labs, the company has a strong presence in this market through its immunodetection platform VIDAS, which is the market leader in that category. Further, bioMerieux has established relationships with Life Technologies and Seegene which provide some complementary technologies with regard to multiplexed food pathogen testing and PCR automation, in addition to the assets and capabilities acquisition of BioFire. Finally, we note that both Life Technologies and Qiagen, leaders in PCR testing, have a line of food pathogen testing assays and automation solutions.

## Outlook for Instrument Placements and Consumables Revenue

As a traditional razor, razor blade business model, Roka derives the vast majority of revenue from the sale of consumables that can only be run on its Atlas system. While rare, a small proportion of systems are purchased for cash (~$150K). Below we detail our system and consumables revenue assumptions.

Figure 11 Market Volume and Cowen Implied Roka Market Share Estimates




Source: Cowen and Company

### Instrument Installed Base Outlook and Assumptions

We expect that Roka ended Q2:14 with a commercial installed base of 38 systems. We forecast 37, 50 and 52 Atlas system placements in 2014-2016, respectively. This implies that the installed base will grow from about 35 currently to 62 by YE14, 112 by YE15, 164 by YE16, 218 by YE17 and 274 by YE18. We believe most initial adopters will relatively quickly have multiple systems in place given the initial focus on high volume labs. Given the business model where revenues are primarily driven by kit consumption, we assume that only 5-10% of placements will be cash purchases (90-95% being reagent rental) at an ASP of $150K. To date, only 2 Atlas instruments have been sold for cash.

We believe Roka already has the test menu to drive our installed base growth expectations. We believe our forecast appears quite reasonable relative to a US market opportunity of likely about 400 sites with volume requirements to support, we estimate, over 1,300 Atlas systems. We remind investors that quarterly system placements are likely to remain lumpy for at least the initial couple years of the launch. Further, as noted, our forecasts do not include any contributions for systems beyond Atlas (i.e. no mini Atlas contributions).

### Consumables Utilization and Revenue Outlook and Assumptions

We forecast Consumables Revenues growth at a 118% CAGR through 2018. Consumables revenue is defined by the test ASP and the utilization rate per system.

We assume an ASP of $8-8.50 through our forecast period; while we note that this is a price sensitive market, we believe Roka's pricing is supportable by the

broader economic advantages enabled by superior automation and faster time to result. Based on our recent discussions with consultants, there may be an argument for the company to be more aggressive on pricing, as a means to compel labs to ramp utilization more quickly, perhaps especially for third party contract labs who are unlikely to be able to charge their clients more for testing performed on Roka and therefore require the scale efficiencies to drive a compelling economic proposition.

For 2014, we forecast $7.1MM in consumables revenue which implies about 900K tests sold which implies less than 20K annualized tests per system (average installed base during year) but note that because it can take customers several quarters to a year or more in some cases to ramp their consumables utilization to full potential, we assume that only about 50% of the installed base in a given period is ramped on utilization. We believe such an adjustment is important in this model so as to avoid unrealistic consumables ramp expectations. Moving forward, we assume the annualized pull through per average system approximates $239K in 2015, $266K in 2016, $296K in 2017 and $321K in 2018. As reflected in figure 11 above, our forecast implies that Roka captures about 12% share of molecular market volume by 2016, increasing to 22% by 2018. We believe this is conservative given our view that Atlas is the clear best in class system for high through molecular pathogen testing in a highly concentrated market where Roka's early customers already likely control over 1/3 of segment market volumes. Said differently, we believe Roka is already well-positioned to over time gain a significant share of the market.

## Pipeline

While Roka's initial commercial strategy is based on driving uptake of its commercialized Atlas system and Atlas pathogen detection assays, the company has an active product development pipeline. We detail the key programs within this pipeline below, but note that any contributions from these sources represent upside to our formal forecasts, as we include only US revenue from the Atlas platform, but do reflect R&D spending pursuant to these opportunities in our income statement forecasts.

From a TAM perspective, we believe the current Atlas platform targets about ~75% of the $730MM pathogen testing market (based on the throughput of the system), but believe complete coverage of this market will be enabled by the commercialization of the Mini Atlas system and non-amplified versions of the Atlas detection assays. Beyond that, assays for chemical contaminants are in early development which could open-up an incremental $550-600MM market opportunity longer term.

### Non-Amplified Versions of Atlas Salmonella and Listeria Detection Assays

Roka is currently developing non-amplified versions of its Salmonella and Listeria detection assays. These assays will be able to run on its Atlas and Mini Atlas systems and deliver high test performance but with a slower time to result (similar to immunodetection) than the amplified versions of the assays. These assays are targeted at customers who may be more price sensitive and therefore unwilling to pay for the amplified assays, but who can still benefit from the automation advantages of the Atlas platform; consistently, management expects to price non-amplified tests comparable to immunodetection options (~$5 per test, with an advantage for Roka on labor savings through Atlas), with the advantage to the company of gaining customers who can over time convert to the automated tests. We believe the non-amplified Listeria test is furthest along in development with a potential commercial launch in H1:15, with Salmonella to follow.

### Mini Atlas System

A lower throughput version (~30 tests per 8 hour day vs. Atlas throughput of 300 tests per 8 hour day) of the Atlas system, referred to as Mini Atlas, is also in development. "Mini" will run the same amplified and non-amplified tests as Atlas, but is targeted at customers without the throughput requirements to justify an Atlas system (below about 75 tests per day); management believes this represents about 25% of the current pathogen testing market. Separately, our consultants believe Mini may see rapid uptake by Atlas customers as it would allow them greater flexibility with their throughput and time to result requirements. We believe Mini could see initial commercial launch in early 2016.

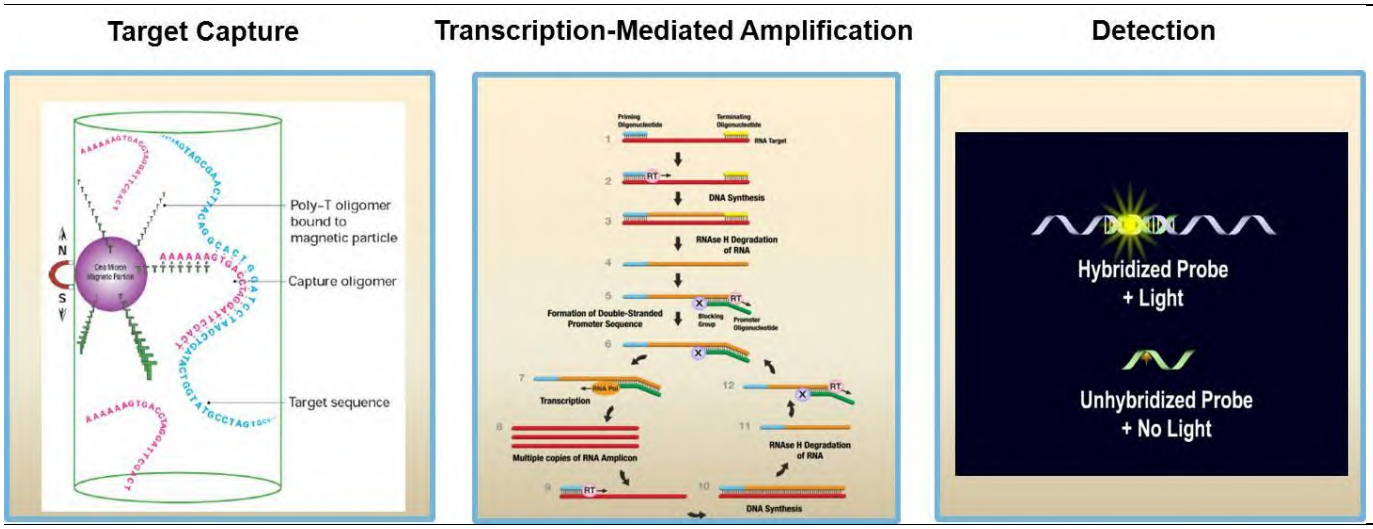
### Chemical Contaminant Tests

The food testing market, in additional to pathogen testing, includes testing for chemical contaminants including allergens, drug residues and mycotoxins. In aggregate, these represent about a $750-800MM market opportunity that would be highly leverage-able with Roka's currently target market. This pipeline program remains in the early stages, therefore, we do not anticipate commercialization (if from organic development) through at least 2017.

## The Technology Behind Roka's Atlas Platform

Roka's Atlas platform is based on three core technologies developed by Gen-Probe for human testing applications. Roka's assays target ribosomal RNA (rRNA) which it believes is the optimal target for food pathogen detection assays, but the technology can be used to detect messenger RNA (mRNA) and DNA. Below we discuss the technology in the context of nucleic acid applications.

Figure 12 Three Core Chemistries Behind Roka's Atlas Platform




Source: Company reports and Cowen and Company

### How it Works

Atlas assays are based on the core chemistries of: (1) target capture; (2) transcription-mediated amplification; and (3) hybridization protection assays.

**Target capture** occurs after the sample is lysed and is driven by hybridization between a "capture" oligomer and the target nucleic acid. Bound capture : target molecules are isolated using magnetic beads bound to oligomers that bind to the capture molecules. Wash steps remove potential inhibitors, background flora, and cross reactors.

**TMA** is a transcription-based isothermal amplification system that uses two different enzymes to drive the process. The first enzyme is a reverse transcriptase that creates a double-stranded DNA copy from an RNA or DNA template while the second enzyme, an RNA polymerase, makes copies of the complementary RNA sequence known as the "RNA amplicon" from the double-stranded DNA template. Each RNA amplicon serves as a new target for the reverse transcriptase and the process repeats automatically, resulting in an exponential amplification of the original target that can produce over a billion copies of amplicon in 30-60 minutes.

**Hybridization protection** detection is started by the addition of acridinium ester-labeled DNA probes which specifically bind to the target sequence. A chemical process is used to distinguish between hybridized and unhybridized probe based on a chemiluminescent signal. Atlas also employs dual kinetic assay technology, which increases the accuracy of its assays by using two types of

chemiluminescent molecules that can detect separate targets simultaneously. This allows for the incorporation of two different detection probes into each detection assay; one probe is specific for the rRNA sequence of the pathogen and the other is used to detect an internal control that enables users to ensure that all the assay steps in the assay were carried out correctly.

## Financial Projections

### Revenue Forecast

We forecast Roka revenues grow at a 106% CAGR between 2013 ($2.2MM) and 2018 (Cowen forecast $80.5MM). Our formal revenue forecast includes only contributions from the current menu and therefore excludes any contributions from products in development. Our detailed revenue assumptions can be found on page 20 of this report.

### P&L Forecast

***Gross Margin*** – COGS for Roka primarily consists of the cost of materials, direct labor and manufacturing overhead costs associated with the production and distribution of the test kits. Roka's business model, like other razor, razor blades in molecular diagnostics, should support gross margins well above 60% at scale based on pricing of about $8-8.50 per test. Consistently, management is confident in achieving gross margin of 55-60% at around $100MM in annualized revenue. We currently model Q4:14 as the first quarter where gross profit is positive, and from there, we model steady and significant expansion to 25% in 2015, 38% in 2016, 45% in 2017 and 53% in 2018 as we expect continued realization of scale economies and improved manufacturing yields to drive steady gross margin expansion for consumables. These estimates assume a royalty rate of about 4% to Gen-Probe/Hologic for the technology license. This royalty rate was initially likely in the low double digits and a buy-down is part of the use of proceeds for the initial offering.

***R&D*** – R&D expense approximated $7.6MM in 2013 and management believes it can execute on its growth strategy (including the pipeline) with annual R&D spend under about $9MM through our model period. By the end of 2014, the menu will include the Atlas system and the menu that covers 98% of market volume. Additionally, there was already some spending on Mini-Atlas in 2014, and this will continue and likely ramp in 2015-2016, but is not significantly incremental to total R&D spend by this period, spend on Atlas menu development will be down materially.

***S&M*** –The food testing market generally allows for a relatively efficient commercial infrastructure. Roka currently has about 20-25 customer facing professionals on staff, with about 15 in sales (5 field applications specialists, 6 field service engineers) and we believe this number already allows for adequate coverage of the US market. We forecast S&M spend ramping steadily from about $10.2MM in 2013 to about $16MM in 2018, which clearly implies this is a source of leverage moving forward.

***G&A*** –We forecast a material increase in G&A spend to $9.4MM (+29% Y/Y) in 2014 driven by expenses related to the transition to a publicly-held company. From there, we forecast G&A spend ramping steadily to about $12MM in 2018, which clearly implies G&A is another source of leverage moving forward.

## Balance Sheet, Cash Flows and Capital Deployment

Roka raised $60MM through an Initial Public Offering (IPO) in July 2014. After this and payments made to Hologic / GenProbe as part of the license agreement renegotiation, we estimate the company's cash balance was about $69MM.

The company closed 2013 with about $33MM in cash and equivalents on its balance sheet compared to $17MM at YE2012, reflecting the net impact of a roughly $42MM in preferred equity financing and an additional $5MM in convertible notes and warrants and $27.5MM in negative cash from operations. Roka has about $10MM in debt / notes payables on its balance sheet, paid off by YE17.

Given the business model, instrument placements have a material impact on Roka's balance sheet and cash flow. Atlas instruments accounted for $10.3MM of the $14.5MM in Property and Equipment on Roka's balance sheet, reflecting the value of Atlas instruments intended for placement with customers and instruments placed with customers under lease agreements, net of accumulated depreciation. Incremental placements every quarter, therefore, are significant drivers of cash from investing activities. On this front, we note that per Roka's supply agreement with Gen-Probe on the Atlas instrument Roka can defer up to ½ the purchase price for up to 54 months from the date of delivery (interest free). This deferred component is carried as a deferred payment liability on Roka's balance sheet.

## Valuation

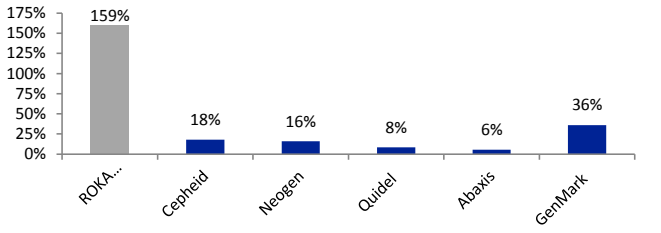
We are initiating coverage of ROKA shares with a $13 PT, derived from a relative multiples comparable company analysis.

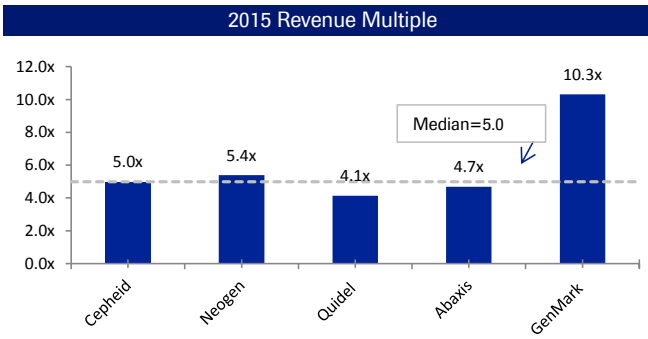
Our comp group (comprised of CPHD, NEOG, QDEL, ABAX, GNMK) is currently trading at a median 5.0x 2015E revenue (EV/Revenue) and 4.2x 2016E revenue. Given the early stage of ROKA's revenue growth trajectory and inflection forecast for 2015-2016, we believe it is fair to view valuation in the context of EV/2016 sales expectations at this point. Based on this metric, applying a slight premium to the comp group median or 4.6x 2016E revenue, equates to a per share value of $13. As we point out in this report, our forecast does not include any revenue contributions outside of that Atlas system and therefore multiple sources of upside exist that would represent upside to our valuation assumptions.

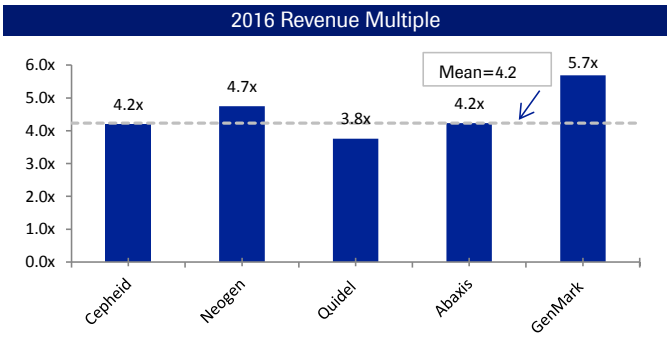
**Figure 13 ROKA – Comparable Company Analysis**

Projected Revenue (Consensus) *(US$ in millions)*

| Company | 2013 | 2014E | 2015E | 2016E |
|---|---|---|---|---|
| ROKA BIOSCIENCE | $2 | $8 | $22 | $38 |
| Cepheid | 390 | 459 | 536 | 638 |
| Neogen | 206 | 246 | 284 | 322 |
| Quidel | 174 | 172 | 201 | 221 |
| Abaxis | 189 | 176 | 200 | 222 |
| GenMark | 27 | 25 | 38 | 68 |




Source: Thomson One and Cowen and Company

### Discounted Cash Flows Analysis

Our analysis of 10-year projected cash flows (centered on a terminal growth rate of 2% and a discount rate of 12%) implies per share value of $11, which also implies 3.7x our 2016E revenue estimate.

## Select Management Profiles

### Paul G. Thomas– President & Chief Executive Officer

- Has served as President, CEO and Director since Roka's founding in September 2009.
- Previously, from October 1998 until September 2008, served as chairman, CEO and President of LifeCell Corporation, which was acquired by Kinetic Concepts, Inc., in May 2008.
- Prior to LifeCell, held various senior positions during his 15-year tenure with the pharmaceutical products division of Ohmeda Inc., now a General Electric Healthcare Company.
- Currently serves as a member of the board of directors of the following publicly-held companies: ABIOMED, Aegerion Pharmaceuticals.

### Steven T. Sobieski – SVP, Treasurer, Chief Financial Officer

- Has served as SVP, CFO and Treasurer since founding in September 2009.
- Previously, from 2000 to May 2009, served as CFO, VP of Finance and Administration of LifeCell.
- From 1991 to 2000, served as VP of Finance and in other positions at Osteotech, Inc., now a wholly-owned subsidiary of Medtronic.
- Currently serves as a member of the board of directors of Insulet Corporation

### AmyJo McCardell– SVP, Commercial Operations

- Has served as SVP, Commercial Operations since May 2010.
- Before joining us, from 2005 to May 2010, served as Global Director of Commercial Development for the rapid testing business of Lonza Bioscience.
- From 2001 to 2005, served as the business unit director of food safety testing for Strategic Diagnostics.
- From 1992 to 2001, held positions of increasing responsibility at Dupont-Qualicon.

### Walter M. Narajowski– SVP, General Manager

- Served as SVP and General Manager since founding in September 2009.
- From October 2005 to December 2008, served as President and CEO of Pathway Diagnostics Corp (acquired by Quest Diagnostics).
- From 2000 to September 2005, served as VP, General Manager of Focus Diagnostics.

## Figure 14 Cowen Summary Revenue Model

| $MM | Q1:13 | Q2:13 | Q3:13 | Q4:13 | Q1:14 | Q2:14E | Q3:14E | Q4:14E | Q1:15E | Q2:15E | Q3:15E | Q4:15E | 2013 | 2014E | 2015E | 2016E | 2017E | 2018E | 5 Yr.CAGR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Total Revenues** | **$0.3** | **$0.7** | **$0.6** | **$0.7** | **$0.8** | **$1.4** | **$2.3** | **$3.3** | **$3.8** | **$4.7** | **$5.9** | **$7.3** | **$2.2** | **$7.7** | **$21.7** | **$38.1** | **$57.8** | **$80.5** | **105.8%** |
| *growth (Y/Y)* | | | | | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *75.3%* | *51.7%* | *39.1%* | |
| *growth (Q/Q)* | | | | | 19.4% | *65.5%* | *67.2%* | *44.4%* | 15.8% | *23.1%* | *27.0%* | *23.2%* | | | | | | | |
| **Non-Product Revenues** | **$0.1** | **$0.1** | **$0.1** | **$0.1** | **$0.1** | **$0.1** | **$0.1** | **$0.1** | **$0.2** | **$0.2** | **$0.2** | **$0.2** | **$0.4** | **$0.4** | **$0.6** | **$0.6** | **$0.6** | **$0.6** | **8.4%** |
| *growth (Y/Y)* | | | | | *0.0%* | *0.0%* | *0.0%* | *0.0%* | *50.0%* | *50.0%* | *50.0%* | *50.0%* | *NM* | *0.0%* | *50.0%* | *0.0%* | *0.0%* | *0.0%* | |
| *% of sales* | *37.6%* | *14.9%* | *18.0%* | *14.5%* | *12.2%* | *7.4%* | *4.4%* | *3.0%* | *3.9%* | *3.2%* | *2.5%* | *2.0%* | *18.3%* | *5.2%* | *2.8%* | *1.6%* | *1.0%* | *0.7%* | |
| **Product Revenues** | **$0.2** | **$0.6** | **$0.5** | **$0.6** | **$0.7** | **$1.3** | **$2.2** | **$3.2** | **$3.7** | **$4.5** | **$5.8** | **$7.2** | **$1.8** | **$7.3** | **$21.1** | **$37.5** | **$57.2** | **$79.9** | **114.0%** |
| *growth (Y/Y)* | | | | | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *77.5%* | *52.6%* | *39.5%* | |
| *% of sales* | *62.4%* | *85.1%* | *82.0%* | *85.5%* | *87.8%* | *92.6%* | *95.6%* | *97.0%* | *96.1%* | *96.8%* | *97.5%* | *98.0%* | *81.7%* | *94.8%* | *97.2%* | *98.4%* | *99.0%* | *99.3%* | |
| **System Revenues** | **$0.0** | **$0.1** | **$0.1** | **$0.0** | **$0.1** | **$0.0** | **$0.1** | **$0.1** | **$0.1** | **$0.2** | **$0.2** | **$0.2** | **$0.2** | **$0.3** | **$0.6** | **$0.8** | **$0.8** | **$0.8** | **35.0%** |
| Reported Growth (Y/Y) | | | | | *80.0%* | *NM* | *22.2%* | *NM* | *NM* | *NM* | *NM* | *60.0%* | *NM* | *48.0%* | *NM* | *30.0%* | *3.8%* | *3.7%* | |
| % of Product Revenues | 22.6% | 11.8% | 14.8% | 2.5% | 9.3% | 2.4% | 3.8% | 3.1% | 3.6% | 3.4% | 2.7% | 2.2% | 10.5% | 3.8% | 2.8% | 2.1% | 1.4% | 1.1% | |
| **ATLAS System Revenues** | **$0.0** | **$0.1** | **$0.1** | **$0.0** | **$0.1** | **$0.0** | **$0.1** | **$0.1** | **$0.1** | **$0.2** | **$0.2** | **$0.2** | **$0.2** | **$0.3** | **$0.6** | **$0.8** | **$0.8** | **$0.8** | |
| % of Product Revenues | 22.6% | 11.8% | 14.8% | 2.5% | 9.3% | 2.4% | 3.8% | 3.1% | 3.6% | 3.4% | 2.7% | 2.2% | 10.5% | 3.8% | 2.8% | 2.1% | 1.4% | 1.1% | |
| % of New Placements cash | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 5.0% | 8.0% | 8.0% | 8.0% | 8.0% | 5.0% | 5.0% | 8.0% | 10.0% | 10.0% | 10.0% | |
| Revenue per analyzers placed | $7.5 | $7.5 | $7.5 | $7.5 | $7.5 | $7.5 | $7.5 | $7.5 | $12.0 | $12.0 | $12.0 | $12.0 | $7.5 | $7.5 | $12.0 | $15.0 | $15.0 | $15.0 | |
| ASP $K | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | $150.0 | |
| **ATLAS Installed Base:** | | | | | | | | | | | | | | | | | | | |
| Start of Period | 0 | 5 | 14 | 23 | 25 | 34 | 38 | 49 | 62 | 73 | 86 | 99 | 0 | 25 | 62 | 112 | 164 | 218 | |
| New Placements in Period | 5 | 9 | 9 | 2 | 9 | 4 | 11 | 13 | 11 | 13 | 13 | 13 | 25 | 37 | 50 | 52 | 54 | 56 | |
| End of Period | 5 | 14 | 23 | 25 | 34 | 38 | 49 | 62 | 73 | 86 | 99 | 112 | 25 | 62 | 112 | 164 | 218 | 274 | |
| Average in Period | 3 | 10 | 19 | 24 | 30 | 36 | 44 | 56 | 68 | 80 | 93 | 106 | 13 | 44 | 87 | 138 | 191 | 246 | |
| Unit Growth (Q/Q) | | | | | *36.0%* | *11.8%* | *28.9%* | *26.5%* | *17.7%* | *17.8%* | *15.1%* | *13.1%* | | | | | | | |
| Installed Base Growth (Y/Y) | | | | | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | | *248.0%* | *100.0%* | *58.6%* | *38.4%* | *28.8%* | |
| **Consumables Revenues** | **$0.1** | **$0.5** | **$0.4** | **$0.6** | **$0.7** | **$1.2** | **$2.1** | **$3.1** | **$3.5** | **$4.4** | **$5.6** | **$7.0** | **$1.6** | **$7.1** | **$20.5** | **$36.7** | **$56.4** | **$79.0** | **118.3%** |
| Reported Growth (Y/Y) | | | | | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *78.9%* | *53.6%* | *40.1%* | |
| % of Product Revenues | 77.4% | 88.2% | 85.2% | 97.5% | 90.7% | 97.6% | 96.2% | 96.9% | 96.4% | 96.6% | 97.3% | 97.8% | 89.5% | 96.2% | 97.2% | 97.9% | 98.6% | 98.9% | |
| **ATLAS Consumables Revenue** | **$0.1** | **$0.5** | **$0.4** | **$0.6** | **$0.7** | **$1.2** | **$2.1** | **$3.1** | **$3.5** | **$4.4** | **$5.6** | **$7.0** | **$1.6** | **$7.1** | **$20.5** | **$36.7** | **$56.4** | **$79.0** | |
| Reported Growth (Y/Y) | | | | | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *NM* | *78.9%* | *53.6%* | *40.1%* | |
| % of Consumables | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | |
| Revenue per LIVE system (Annualized; $K) | $514.4 | $670.7 | $222.3 | $286.8 | $261.8 | $307.5 | $348.5 | $374.0 | $391.0 | $416.5 | $442.0 | $467.5 | $335.6 | $340.3 | $434.7 | $459.0 | $467.5 | $476.0 | |
| Revenue per ave. system (Annualized; $K) | $205.8 | $211.8 | $84.1 | $95.6 | $88.7 | $136.7 | $192.3 | $222.4 | $208.5 | $220.0 | $243.7 | $265.9 | $127.5 | $162.3 | $236.1 | $266.2 | $295.5 | $321.3 | |
| Total tests in period (,000) | 15 | 57 | 44 | 66 | 77 | 145 | 246 | 363 | 414 | 515 | 663 | 825 | 182 | 831 | 2,417 | 4,322 | 6,639 | 9,299 | |
| Number of placements LIVE | 1 | 3 | 7 | 8 | 10 | 16 | 24 | 33 | 36 | 42 | 51 | 60 | 5 | 21 | 47 | 80 | 121 | 166 | |
| % of installed base LIVE | 25.0% | 35.0% | 40.0% | 35.0% | 35.0% | 45.0% | 55.0% | 60.0% | 54.0% | 53.0% | 55.0% | 56.8% | 38.0% | 47.7% | 54.3% | 58.0% | 63.2% | 67.5% | |
| Tests per year per LIVE placement (,000) | 59 | 77 | 25 | 33 | 31 | 36 | 41 | 44 | 46 | 49 | 52 | 55 | 38 | 40 | 51 | 54 | 55 | 56 | |
| ASP $ | $8.8 | $8.8 | $8.8 | $8.8 | $8.5 | $8.5 | $8.5 | $8.5 | $8.5 | $8.5 | $8.5 | $8.5 | $8.5 | $8.5 | $8.5 | $8.5 | $8.5 | $8.5 | |

Source: Company reports and Cowen and Company

Figure 15 Cowen Summary Income Statement

| $MM, except per share data | Q1:13 | Q2:13 | Q3:13 | Q4:13 | Q1:14 | Q2:14E | Q3:14E | Q4:14E | Q1:15E | Q2:15E | Q3:15E | Q4:15E | 2013 | 2014E | 2015E | 2016E | 2017E | 2018E | 5 Yr.CAGR |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Net sales** | **$0.3** | **$0.7** | **$0.6** | **$0.7** | **$0.8** | **$1.4** | **$2.3** | **$3.3** | **$3.8** | **$4.7** | **$5.9** | **$7.3** | **$2.2** | **$7.7** | **$21.7** | **$38.1** | **$57.8** | **$80.5** | **105.8%** |
| Growth | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | | 254.7% | 180.9% | 75.3% | 51.7% | 39.1% | |
| **Cost of sales** | **$1.9** | **$0.9** | **$2.1** | **$1.8** | **$1.3** | **$2.7** | **$2.7** | **$3.0** | **$3.3** | **$3.7** | **$4.3** | **$5.0** | **$6.6** | **$9.6** | **$16.3** | **$23.6** | **$31.8** | **$37.8** | |
| **Gross Profit** | **($1.6)** | **($0.2)** | **($1.5)** | **($1.1)** | **($0.4)** | **($1.3)** | **($0.5)** | **$0.3** | **$0.5** | **$1.0** | **$1.7** | **$2.3** | **($4.4)** | **($1.9)** | **$5.4** | **$14.5** | **$26.0** | **$42.7** | **NM** |
| % of sales | (603.7%) | (28.6%) | (276.2%) | (157.2%) | (53.9%) | (95.0%) | (20.0%) | 10.0% | 12.0% | 21.0% | 28.0% | 32.0% | NM | (24.1%) | 25.0% | 38.0% | 45.0% | 53.0% | |
| Growth | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | 79.7% | 63.9% | |
| **Research and Development** | **$1.8** | **$1.9** | **$2.1** | **$1.7** | **$1.8** | **$2.3** | **$2.1** | **$2.0** | **$1.9** | **$1.9** | **$1.9** | **$1.9** | **$7.6** | **$8.3** | **$7.5** | **$7.6** | **$8.1** | **$8.5** | **2.2%** |
| % of sales | NM | NM | NM | NM | NM | NM | NM | NM | 49.3% | 40.1% | 31.6% | 25.6% | NM | 107.3% | 34.5% | 20.0% | 14.0% | 10.5% | |
| Growth | NM | NM | NM | NM | 5.1% | 17.8% | (0.2%) | 17.7% | 1.8% | (18.2%) | (12.2%) | (8.0%) | (21.0%) | 9.8% | (9.7%) | 1.6% | 6.2% | 4.4% | |
| **Sales and Marketing** | **$2.4** | **$2.6** | **$2.6** | **$2.6** | **$2.8** | **$3.1** | **$3.0** | **$2.6** | **$3.0** | **$3.0** | **$3.0** | **$3.0** | **$10.2** | **$11.6** | **$12.0** | **$13.0** | **$14.5** | **$15.3** | **8.4%** |
| % of sales | NM | NM | NM | NM | NM | NM | NM | NM | 79.1% | 64.2% | 50.6% | 41.1% | NM | 149.5% | 55.3% | 34.0% | 25.0% | 19.0% | |
| Growth | NM | NM | NM | NM | 14.9% | 19.0% | 15.0% | 3.8% | 7.9% | (3.2%) | (0.8%) | 13.4% | 13.5% | 13.2% | 3.9% | 7.8% | 11.6% | 5.7% | |
| **General and Administrative** | **$1.8** | **$1.7** | **$1.7** | **$2.0** | **$2.3** | **$2.4** | **$2.3** | **$2.4** | **$2.5** | **$2.5** | **$2.5** | **$2.5** | **$7.3** | **$9.4** | **$10.1** | **$10.7** | **$11.6** | **$12.1** | **10.7%** |
| % of sales | NM | NM | NM | NM | NM | NM | NM | NM | 66.1% | 53.8% | 42.4% | 34.7% | NM | 121.0% | 46.4% | 28.0% | 20.0% | 15.0% | |
| Growth | NM | NM | NM | NM | 22.9% | 41.1% | 34.4% | 19.6% | 11.4% | 6.9% | 8.4% | 4.3% | 3.0% | 28.9% | 7.7% | 5.8% | 8.4% | 4.4% | |
| **Other (Amort. of Intang.)** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.2** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **NM** |
| % of sales | 15.8% | 6.3% | 7.5% | 6.1% | 5.1% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | 0.0% | NM | 0.5% | 0.0% | 0.0% | 0.0% | 0.0% | |
| Growth | NM | NM | NM | NM | 0.1% | NM | NM | NM | NM | NM | NM | NM | (0.1%) | (75.0%) | NM | NM | NM | NM | |
| **Total Operating Expenses** | **$6.1** | **$6.3** | **$6.5** | **$6.4** | **$6.9** | **$7.7** | **$7.5** | **$7.1** | **$7.4** | **$7.4** | **$7.4** | **$7.4** | **$25.2** | **$29.3** | **$29.6** | **$31.3** | **$34.1** | **$35.8** | **7.3%** |
| % of sales | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | 82.0% | 59.0% | 44.5% | |
| Growth | NM | NM | NM | NM | 14.4% | 23.7% | 14.4% | 12.0% | 6.8% | (4.6%) | (1.2%) | 4.2% | (2.3%) | 16.1% | 1.1% | 5.6% | 9.2% | 4.9% | |
| **EBITDA** | **($7.4)** | **($6.1)** | **($7.5)** | **($6.3)** | **($6.6)** | **($8.0)** | **($6.7)** | **($5.2)** | **($5.4)** | **($4.6)** | **($3.8)** | **($2.9)** | **($27.2)** | **($26.5)** | **($16.8)** | **($7.9)** | **$0.0** | **$16.4** | **NM** |
| % of sales | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | (77.1%) | (20.7%) | 0.1% | 20.3% | |
| Growth | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | |
| **Depreciation & Amortization** | **$0.3** | **$0.4** | **$0.6** | **$1.1** | **$0.8** | **$1.0** | **$1.2** | **$1.6** | **$1.5** | **$1.8** | **$1.9** | **$2.2** | **$2.4** | **$4.6** | **$7.4** | **$8.9** | **$8.1** | **$9.5** | |
| **Operating Profit** | **($7.7)** | **($6.5)** | **($8.1)** | **($7.4)** | **($7.4)** | **($9.0)** | **($7.9)** | **($6.8)** | **($6.9)** | **($6.4)** | **($5.7)** | **($5.1)** | **($29.6)** | **($31.1)** | **($24.2)** | **($16.8)** | **($8.1)** | **$6.8** | **NM** |
| % of sales | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | (44.0%) | (14.0%) | 8.5% | |
| Growth | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | |
| Incremental Margin | NM | NM | NM | NM | NM | NM | NM | NM | 14.4% | 79.2% | 60.2% | 42.5% | (36.2%) | (27.1%) | 49.9% | 45.1% | 44.0% | 66.0% | |
| **Other non-Operating Expense** | **($0.0)** | **$0.0** | **$0.0** | **$0.0** | **$0.6** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **($0.0)** | **$0.6** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | |
| **Net Interest Expense** | **$0.1** | **$0.1** | **$2.7** | **$0.2** | **$0.4** | **$0.3** | **$0.4** | **$0.3** | **$0.4** | **$0.4** | **$0.4** | **$0.4** | **$3.0** | **$1.4** | **$1.7** | **$1.7** | **$1.7** | **$1.7** | |
| **Earnings Before Taxes** | **($7.7)** | **($6.5)** | **($10.8)** | **($7.6)** | **($8.4)** | **($9.3)** | **($8.4)** | **($7.1)** | **($7.3)** | **($6.8)** | **($6.2)** | **($5.5)** | **($32.7)** | **($33.1)** | **($25.8)** | **($18.4)** | **($9.8)** | **$5.2** | **NM** |
| % of sales | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | (48.4%) | (16.9%) | 6.4% | |
| Growth | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | |
| **Income Taxes** | **$0.0** | **($0.0)** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | |
| Rate | NM | NM | NM | NM | NM | 0.0% | 0.0% | (0.1%) | 0.0% | 0.0% | 0.0% | (0.1%) | (0.1%) | (0.0%) | (0.0%) | 0.0% | 0.0% | 0.0% | |
| **Net Income** | **($7.7)** | **($6.5)** | **($10.8)** | **($7.6)** | **($8.4)** | **($9.3)** | **($8.4)** | **($7.1)** | **($7.3)** | **($6.8)** | **($6.2)** | **($5.5)** | **($32.7)** | **($33.1)** | **($25.8)** | **($18.4)** | **($9.8)** | **$5.2** | **NM** |
| % of sales | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | (48.4%) | (16.9%) | 6.4% | |
| Growth | | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | |
| **Earnings Per Share** | **($0.43)** | **($0.36)** | **($0.60)** | **($0.42)** | **($0.46)** | **($0.52)** | **($0.46)** | **($0.39)** | **($0.40)** | **($0.38)** | **($0.34)** | **($0.30)** | **($1.81)** | **($1.83)** | **($1.42)** | **($1.00)** | **($0.53)** | **$0.28** | **NM** |
| Shares Outstanding | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 | 18.1 | 18.2 | 18.2 | 18.3 | 18.3 | 18.1 | 18.1 | 18.2 | 18.4 | 18.5 | 18.7 | |
| Growth | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | NM | |

Source: Company reports and Cowen and Company

Figure 16 Cowen Summary Balance Sheet

| (MM, except EPS) | 2013 | 2014E | 2015E | 2016E | 2017E | 2018E | 5-yr CAGR |
|---|---|---|---|---|---|---|---|
| **ASSETS** | | | | | | | |
| Cash & Equivalents | $32.7 | $50.7 | $20.3 | $54.9 | $41.8 | $47.2 | 7.6% |
| Accounts Receivable, net of doubtful | $0.3 | 0.9 | 2.1 | 3.4 | 4.6 | 5.9 | 84.1% |
| Inventories | $3.9 | 4.9 | 7.6 | 10.0 | 12.4 | 13.7 | 28.7% |
| Other | $5.6 | 3.9 | 4.3 | 5.7 | 5.8 | 5.6 | 0.2% |
| **Total Current Assets** | **$42.5** | **$60.3** | **$34.3** | **$73.9** | **$64.6** | **$72.4** | **11.3%** |
| Property and Equipment | $14.5 | $10.5 | $9.7 | $7.7 | $5.8 | $2.9 | (27.7%) |
| Intangible assets, net | $1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 1.3 | 0.0% |
| Other | $0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.8 | 0.0% |
| **Total LT Assets** | **$16.7** | **$12.7** | **$11.9** | **$9.9** | **$8.0** | **$5.0** | **(21.3%)** |
| **TOTAL ASSETS** | **$59.1** | **$73.0** | **$46.2** | **$83.8** | **$72.6** | **$77.4** | **5.5%** |
| **LIABILITIES** | | | | | | | |
| Accounts Payable | $1.2 | $1.7 | $2.8 | $3.9 | $5.2 | $5.9 | 37.1% |
| ST deferred payment | $0.3 | $0.3 | $0.3 | $0.3 | $0.3 | $0.3 | 0.0% |
| Notes Payable | $4.9 | $10.0 | $7.0 | $2.5 | $0.0 | 0.0 | (100.0%) |
| Accruals and Other | $2.4 | 2.3 | 3.3 | 5.4 | 7.6 | 9.9 | 32.9% |
| **Total Current Liabilities** | **$8.9** | **$14.4** | **$13.4** | **$12.2** | **$13.1** | **$16.2** | **12.8%** |
| **Long Term Debt, net of payable** | **$0.0** | **$0.0** | **($3.0)** | **($7.5)** | **($10.0)** | **($10.0)** | NM |
| **Other Non-Currents** | $3.8 | **$3.8** | **$3.8** | **$3.8** | **$3.8** | **$3.8** | NM |
| **Total Liabilities** | **$12.7** | **$18.1** | **$14.2** | **$8.5** | **$6.9** | **$10.0** | **(4.7%)** |
| **Total Shareholder Equity** | **($81.3)** | **$54.8** | **$32.0** | **$75.3** | **$65.7** | **$67.5** | **NM** |
| **TOTAL LIAB. & SHAREHOLDER EQUITY** | **$59.1** | **$73.0** | **$46.2** | **$83.8** | **$72.6** | **$77.4** | **5.5%** |

Source: Company reports and Cowen and Company

Figure 17 Cowen Summary Statement of Cash Flows

| (MM, except EPS) | 2013 | 2014E | 2015E | 2016E | 2017E | 2018E | 5-yr CAGR |
|---|---|---|---|---|---|---|---|
| **CASH FLOWS FROM OPERATING ACTIVITIES** | | | | | | | |
| **Net Income** | **($29.6)** | **($33.1)** | **($25.8)** | **($18.4)** | **($9.8)** | **$5.2** | **NM** |
| **Depreciation & Amortization** | **$2.4** | **$4.6** | **$7.4** | **$8.9** | **$8.1** | **$9.5** | **NM** |
| Growth | | 89% | 61% | 20% | 10% | 7% | |
| Change in fair value of financial instruments | $2.6 | $2.7 | $2.9 | $2.9 | $3.0 | $3.0 | |
| Loss on disposal of PandE | $0.1 | $0.1 | $0.1 | $0.1 | $0.1 | $0.1 | |
| Share-based Compensation | $0.7 | $0.7 | $0.8 | $0.8 | $0.8 | $0.8 | |
| Other | ($1.6) | ($1.7) | ($1.8) | ($1.8) | ($1.9) | ($1.9) | |
| **Change in Working Capital** | **($2.1)** | **$0.6** | **($4.3)** | **($6.3)** | **($4.7)** | **($4.7)** | |
| Accounts Receivables | ($0.2) | ($0.6) | ($1.3) | ($1.3) | ($1.2) | ($1.3) | |
| Inventories | ($0.8) | ($1.0) | ($2.7) | ($2.7) | ($2.4) | ($2.5) | |
| Other Current Assets | ($0.9) | $1.7 | ($0.5) | ($1.4) | ($0.1) | $0.2 | |
| Accounts Payable | ($0.1) | $0.5 | $1.1 | $1.1 | $1.1 | $1.2 | |
| Deferred Taxes | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | |
| Other liabilities | $0.0 | $0.1 | ($1.0) | ($2.1) | ($2.2) | ($2.3) | |
| **CASH FLOWS FROM OPERATIONS** | **($27.5)** | **($26.1)** | **($20.8)** | **($14.0)** | **($4.4)** | **$12.0** | **NM** |
| **CASH FLOWS FROM INVESTING ACTIVITIES** | | | | | | | |
| Purchases of Property and Equipment | ($3.4) | ($0.6) | ($6.6) | ($6.9) | ($6.3) | ($6.6) | |
| Maturities/Sale (Purchase) of investments | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | |
| Acquisitions | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | |
| Net Sale (Purchase) Of Marketable Securities | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | |
| Payment for IP Licenses, Other | $0.0 | ($8.0) | $0.0 | $0.0 | $0.0 | $0.0 | |
| **CASH FLOWS FROM INVESTING** | **($3.4)** | **($8.6)** | **($6.6)** | **($6.9)** | **($6.3)** | **($6.6)** | **NM** |
| **CASH FLOWS FROM FINANCING ACTIVITIES** | | | | | | | |
| Proceeds/Issuance of Debt and Warrants | $4.7 | $5.3 | $0.0 | $0.0 | $0.0 | $0.0 | |
| Debt Payments | $0.0 | $0.0 | ($3.0) | ($4.5) | ($2.5) | $0.0 | |
| Proceeds from Stock Options | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | |
| Share Repurchase | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | |
| Issuance/Proceeds of Stock Offering | $41.8 | $60.0 | $0.0 | $60.0 | $0.0 | $0.0 | |
| Proceeds from exercise of options/borrowings | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | |
| Other | ($0.2) | $0.0 | $0.0 | $0.0 | $0.0 | $0.0 | |
| **CASH FLOWS FROM FINANCING** | **$46.3** | **$65.3** | **($3.0)** | **$55.5** | **($2.5)** | **$0.0** | **NM** |
| **FX IMPACT** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | **$0.0** | |
| **NET INCR. (DECR.) IN CASH & EQUIV.** | **$15.4** | **$30.6** | **($30.4)** | **$34.6** | **($13.1)** | **$5.5** | **NM** |

Source: Company reports and Cowen and Company

# Valuation Methodology And Risks

## Valuation Methodology

**Life Science & Diagnostic Tools:**

Price targets are based on several methodologies which may include: analysis of market risk, growth rate, revenue stream, discounted cash flows (DCF), EBITDA, EPS, cash flow (CF), free cash flow (FCF), EV/EBITDA, P/E, PE/growth, P/CF, P/FCF, premium (discount) / average group EV/EBITDA, premium (discount) / average group P/E, sum of the parts, net asset value, dividend returns, and return on equity (ROE) over the next 12 months.

## Investment Risks

**Life Science & Diagnostic Tools:**

Risks to the Medical and Life Science Tools sector may include: reduction or delay in research and development budgets and government funding, reduced or delayed purchasing from health care / hospital customers, increased or extended regulatory hurdles or processes for regulated products, increased dependence on volatile emerging markets for revenues and profitability, and general macroeconomic challenges.

## Risks To The Price Target

The pace of placements slows / tracks below expectations

The rate of utilization growth is slower than expected

Large customer losses

Key pipeline programs stall

# *Addendum*

## Stocks Mentioned In Important Disclosures

| Ticker | Company Name |
|---|---|
| GNMK | Genmark Diagnostics |
| ROKA | Roka Bioscience |

## Analyst Certification

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***Cowen and Company Rating System effective May 25, 2013***

**Outperform (1):** The stock is expected to achieve a total positive return of at least 15% over the next 12 months

**Market Perform (2):** The stock is expected to have a total return that falls between the parameters of an Outperform and Underperform over the next 12 months

**Underperform (3):** Stock is expected to achieve a total negative return of at least 10% over the next 12 months

**Assumption:** The expected total return calculation includes anticipated dividend yield

***Cowen and Company Rating System until May 25, 2013***

**Outperform (1):** Stock expected to outperform the S&P 500

**Neutral (2):** Stock expected to perform in line with the S&P 500

**Underperform (3):** Stock expected to underperform the S&P 500

**Assumptions:** Time horizon is 12 months; S&P 500 is flat over forecast period

***Cowen Securities, formerly known as Dahlman Rose & Company, Rating System until May 25, 2013***

**Buy** – The fundamentals/valuations of the subject company are improving and the investment return is expected to be 5 to 15 percentage points higher than the general market return

**Sell** – The fundamentals/valuations of the subject company are deteriorating and the investment return is expected to be 5 to 15 percentage points lower than the general market return

**Hold** – The fundamentals/valuations of the subject company are neither improving nor deteriorating and the investment return is expected to be in line with the general market return

## Cowen And Company Rating Definitions

**Distribution of Ratings/Investment Banking Services (IB) as of 06/30/14**

| Rating | Count | Ratings Distribution | Count | IB Services/Past 12 Months |
|---|---|---|---|---|
| Buy (a) | 417 | 58.57% | 94 | 22.54% |
| Hold (b) | 279 | 39.19% | 7 | 2.51% |
| Sell (c) | 16 | 2.25% | 0 | 0.00% |

(a) Corresponds to "Outperform" rated stocks as defined in Cowen and Company, LLC's rating definitions. (b) Corresponds to "Market Perform" as defined in Cowen and Company, LLC's ratings definitions. (c) Corresponds to "Underperform" as defined in Cowen and Company, LLC's ratings definitions.

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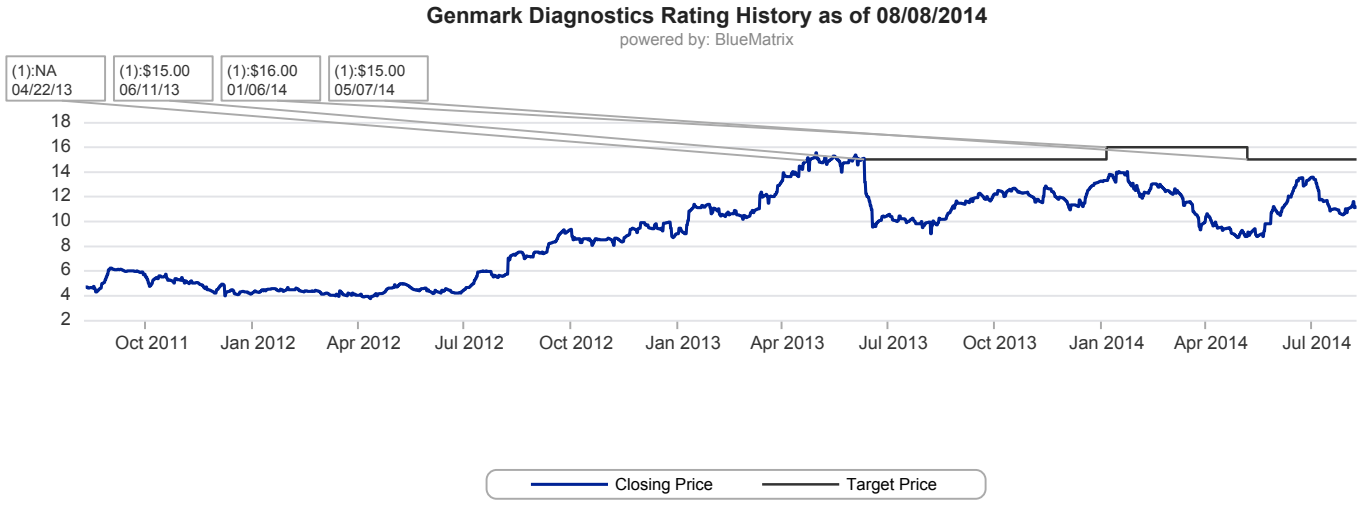


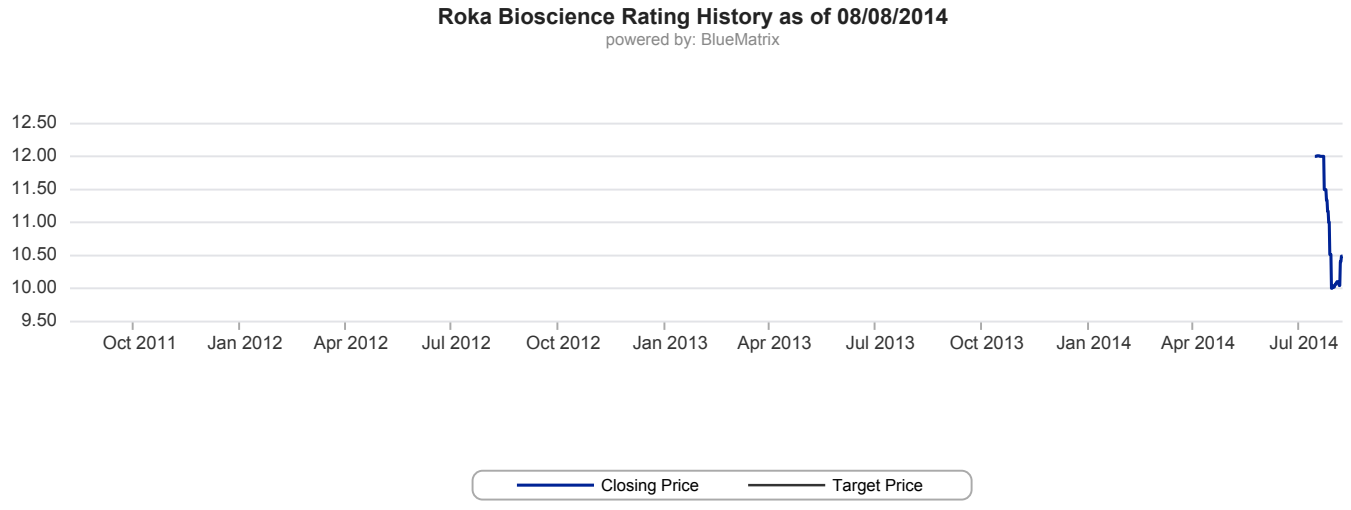


**Legend for Price Chart:**

I = Initiation | 1 = Outperform | 2 = Market Perform | 3 = Underperform | UR = Price Target Under Review | T = Terminated Coverage | $xx = Price Target | NA = Not Available | S=Suspended

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