

## **New Product Innovation Award Workflow Solutions in Life Sciences North America, 2011**

### **Frost & Sullivan's Global Research Platform**

Frost & Sullivan is in its 50th year in business with a global research organization of 1,800 analysts and consultants who monitor more than 300 industries and 250,000 companies. The company's research philosophy originates with the CEO's 360 Degree Perspective™, which serves as the foundation of its TEAM Research™ methodology. This unique approach enables us to determine how best-in-class companies worldwide manage growth, innovation and leadership. Based on the findings of this Best Practices research, Frost & Sullivan is proud to present the 2011 North American New Product Innovation Award for Workflow Solutions in Life Sciences to BioTek Instruments, Inc. (BioTek).

### **Significance of the New Product Innovation Award**

#### **Key Industry Challenges Addressed by Innovation Approaches to Life Sciences**

The U.S. Healthcare sector presents numerous challenges - from ever escalating costs being expended without a resulting improvement in quality or efficiency, to poor end-to-end management of diseases and conditions that ultimately lead to lowered health outcomes and poor quality of life. Unwieldy administrative and information systems and bottlenecks in workflow serve to further complicate the streamlined delivery of care. Also, unmet clinical needs continue to present themselves as population and lifestyle dynamics change over time.

In the present environment, the drive for new innovations to achieve a superior level of care in the diagnosis, treatment and management of disease, which result in better clinical outcomes and quality of life for patients, is of paramount importance to strengthen the delivery of healthcare. Of equal importance are innovations that lead to improvements in the tools that clinicians, diagnosticians, researchers and healthcare administrators have at their disposal to improve quality and efficiency in the provision of healthcare services. Healthcare innovations that serve unmet clinical or research needs also serve to raise the health status of patients around the world.

#### **Impact of New Product Innovation Award on Key Stakeholders**

The New Product Innovation Award is a prestigious recognition of BioTek's accomplishments in the life sciences sector. An unbiased, third-party recognition can provide a profound impact in enhancing the brand value and accelerating BioTek's growth. As captured in Chart 1 below, by researching, ranking, and recognizing those who deliver

excellence and best practices in their respective endeavors, Frost & Sullivan hopes to inspire, influence, and impact three specific constituencies:

- **Investors**

Investors and shareholders always welcome unbiased and impartial third-party recognition. Similarly, prospective investors and shareholders are drawn to companies with a well-established reputation for excellence. Unbiased validation is the best and most credible way to showcase an organization worthy of investment.

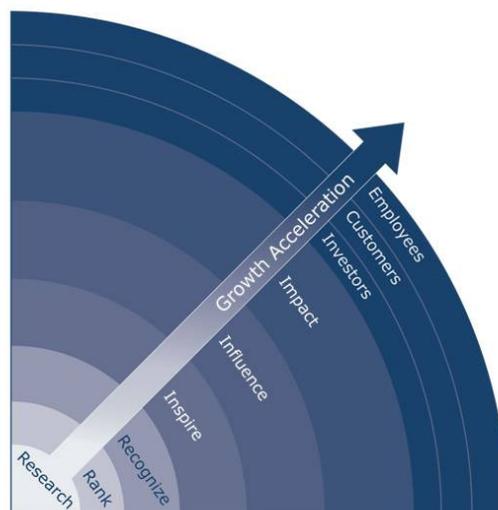
- **Customers**

Third-party industry recognition has been proven to be the most effective way to assure customers that they are partnering with an organization that is leading in its field.

- **Employees**

This Award represents the creativity and dedication of BioTek’s executive team and employees. Such public recognition can boost morale and inspire these stakeholders to continue the best-in-class pursuit of innovative solutions for BioTek.

**Chart 1: Best Practices Leverage for Growth Acceleration**



### Key Benchmarking Criteria for New Product Innovation Award

For the New Product Innovation Award, the following criteria were used to benchmark BioTek’s performance against key competitors:

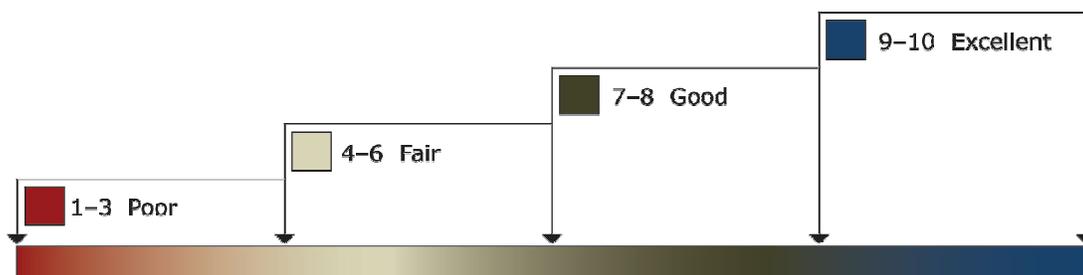
- **Innovative Element of the Product**

- **Leverage Leading Edge Technologies in Product**
- **Value Added Features/Benefits**
- **Increased Customer ROI**
- **Customer Acquisition/Penetration Potential**

## Decision Support Matrix and Measurement Criteria

To support its evaluation of best practices across multiple business performance categories, Frost & Sullivan employs a customized Decision Support Matrix (DSM). The DSM is an analytical tool that compares companies' performance relative to each other with an integration of quantitative and qualitative metrics. The DSM features criteria unique to each Award category and ranks importance by assigning weights to each criterion. The relative weighting reflects current market conditions and illustrates the associated importance of each criterion according to Frost & Sullivan. Fundamentally, each DSM is distinct for each market and Award category. The DSM allows our research and consulting teams to objectively analyze each company's performance on each criterion relative to its top competitors and assign performance ratings on that basis. The DSM follows a 10-point scale that allows for nuances in performance evaluation; ratings guidelines are shown in Chart 2.

**Chart 2: Performance-Based Ratings for Decision Support Matrix**



This exercise encompasses all criteria, leading to a weighted average ranking of each company. Researchers can then easily identify the company with the highest ranking. As a final step, the research team confirms the veracity of the model by ensuring that small changes to the ratings for a specific criterion do not lead to a significant change in the overall relative rankings of the companies.

**Chart 3: Frost & Sullivan’s 10-Step Process for Identifying Award Recipients**



**Best Practice Award Analysis for BioTek**

The Decision Support Matrix, shown in Chart 4, illustrates the relative importance of each criterion for the New Product Innovation Award and the ratings for each company under evaluation. To remain unbiased while also protecting the interests of the other organizations reviewed, we have chosen to refer to the other key players as Competitor 1 and Competitor 2.

**Chart 4: Decision Support Matrix for New Product Innovation Award**

<i>Measurement of 1-10 (1 = lowest; 10 = highest)</i>	<b>Award Criteria</b>					
	Innovative Element of the Product	Leverage Leading Edge Technologies in Product	Value Added Features/Benefits	Increased Customer ROI (small change)	Customer Acquisition/Penetration Potential	<b>Weighted Rating</b>
<b>Relative Weight (%)</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>20%</b>	<b>100%</b>
<b>BioTek Instruments, Inc.</b>	<b>10</b>	<b>10</b>	<b>10</b>	<b>8</b>	<b>7</b>	<b>9.0</b>
Competitor 1	8	9	6	7	6	7.2
Competitor 2	6	8	5	7	5	6.2

## Introduction

Frost & Sullivan proudly recognizes BioTek as the recipient of the 2011 New Product Innovation Award for Workflow Solutions in Life Sciences. BioTek provides innovative microplate instrumentation and software for a wide range of applications. The company uniquely maintains a strict focus on microplate-based technologies, which allows concentrated R&D efforts to improve this mature technology. By partnering with reagent providers and customers to improve product development, BioTek remains in tune with the research community. These relationships position BioTek to remain a leader in pinpointing microplate workflow challenges and in finding innovative solutions. This dedication resulted in the launch of over 20 new BioTek products in this market over the last four years. Frost & Sullivan feels that BioTek's product launches far outpace new competitor offerings and earned this company a well-deserved reputation for innovation. For its commitment to improving technology and streamlining workflows, BioTek is the most ideal recipient of the Frost & Sullivan New Product Innovation Award.

## Innovative Products

Microplate readers measure analytes in a broad range of assay types, including ELISAs, ADME-Tox assays, fluorometric, luminescent, and cell-based assays. By focusing on a single technology, and remaining dedicated to providing innovative, high value products, BioTek continues to make significant time saving and performance improvements in microplate-based workflows. The company's intelligence and relationship building fosters new ideas, while its dedicated focus allows it to quickly act on ideas and turn them into reality.

To aid in identifying product enhancements, optimize customer workflows and develop process-specific data, BioTek makes use of its scientific Applications Lab. Here, in-house BioTek scientists partner with a broad range of assay reagent companies to optimize the firm's microplate instrumentation with the newest, most cutting-edge science. BioTek and their collaborators often co-author papers on optimized assay methods using BioTek's instruments, and even co-market products, making these relationships mutually beneficial to the companies involved. Additionally, customers gain confidence that the assays they purchase are optimized on BioTek platforms without the hassle and time of performing their own trial-and-error validation methods. Ultimately, Frost & Sullivan is of the opinion that these practices result in a product line that boasts flexibility, automation of traditionally manual steps, technology integration, speed, and tremendous value for the price.

Traditional microplate readers fall into two distinct detection systems. One category uses a monochromator detection system, while the other contains a filter/dichroic detection technology. Previously, researchers had to choose one over the other, thus compromising on flexibility or performance. Monochromator-based microplate readers allow the researcher to dial in any wavelength to measure a sample. While flexible, this technology

loses signal to and from the sample in the process, and thus, detection sensitivity. Meanwhile microplate readers with filter/dichroic detection systems measure samples at a specific, filtered wavelength and can precisely detect very minute levels of analyte, but the need for dedicated filters at each wavelength reduces overall flexibility. BioTek combined these detection technologies into one platform to create a new breed of microplate readers - a true hybrid system. The company developed the first hybrid systems, the Synergy™ H1 and Synergy™ H4 Hybrid Multi-Mode Microplate Readers, that allow researchers to easily switch between monochromator- and filter-based detection systems based on their application needs. Rather than purchasing two separate instruments, or sacrificing flexibility or performance by using only one microplate detection technology, researchers now have the best of both worlds in one affordable, flexible and sensitive instrument. Frost & Sullivan independent research confirms that, in a mature market, this innovation attracted attention and helped BioTek gain even greater market share over its competitors.

In addition to microplate readers, BioTek also offers a broad portfolio of intelligent liquid handling instruments for the microplate workflow. One goal of the Applications Lab is to identify bottlenecks and challenges in research workflows and find ways to resolve them. Recognizing the tedious nature of multiple manual washing and dispensing steps involving several instruments along the liquid handling process, BioTek set out to automate and combine the steps into one instrument. This simple, yet novel idea resulted in the EL406™ Combination Washer Dispenser, combining rapid microplate washing and reagent dispensing into one single platform. Recognizing that peristaltic and syringe pump dispenser technologies each have unique advantages, BioTek eliminated the need to choose between them, adding both dispenser types to the system for enhanced flexibility. In addition, the instrument employs the company's innovative Ultrasonic Advantage™, an integrated ultrasonic cleaner for washing the manifold. Liquid handling processes are often challenged by clogged tubes and contamination that could cause the assay to fail, and require time-consuming detachment of instrument parts and manual washing in a separate ultrasonic cleaner. With BioTek's solution of integrating the cleaner directly in the unit, researchers can program the washer to automatically self-clean after they leave the laboratory for the day. Ultimately, the EL406™ is a perfect example of the company's insightful instrument improvements and integration of technologies resulting in flexible, rapid, and high-value products.

### **Best Practices**

Having several key best practices in place enables BioTek to design innovative, high-quality products and remain successful in a competitive marketplace. The Applications Lab allows the company to identify technology and application trends, and maintain a close relationship with customers and reagent providers in order to fulfill unmet needs and solve challenges when developing new products. Furthermore, the company maintains strict quality assurance parameters under ISO 9001 and ISO 13485 Quality System

registrations and as an FDA registered medical device manufacturer. The firm does not maintain separate quality systems for clinical vs. non-clinical instruments, ensuring superior performance across its entire line of products. In addition, BioTek insists on maintaining strong customer service, and measures it through monthly surveys by an outside organization. The firm gains feedback from both pre-sale and post-sale customers, and continues to maintain a satisfaction rating of over 95%. This satisfaction is attributable to BioTek's incredible customer support system that performs installation and training for end-users, and a technical assistance program that lasts for the lifetime of the product. These best practices have earned BioTek a reputation for high-quality, cutting-edge microplate instrumentation, and best-in-class customer support.

## Conclusion

In very mature markets, vendors often fail to introduce significant innovations, as products attain near-peak performance and the customer base reaches saturation. BioTek is the exception, consistently launching new microplate instrumentation, automation, and software with highly intuitive improvements. The company's intelligent Applications Lab initiative results in optimized microplate-based assay methods, customer confidence, increased brand awareness, and ideas for product enhancements. With best practices in place, the firm quickly translates ideas into products, resulting in 20 new product launches over the last four years, thus continually setting the bar for flexibility, ease-of-use, and value. For its commitment to technology innovation leading to improved research efficiencies and enhanced customer value, Frost & Sullivan is pleased to present the 2011 New Product Innovation Award to BioTek Instruments.

## The CEO 360-Degree Perspective™ - Visionary Platform for Growth Strategies

The CEO 360-Degree Perspective™ model provides a clear illustration of the complex business universe in which CEOs and their management teams live today. It represents the foundation of Frost & Sullivan's global research organization and provides the basis on which companies can gain a visionary and strategic understanding of the market. The CEO 360-Degree Perspective™ is also a “must-have” requirement for the identification and analysis of best-practice performance by industry leaders.

The CEO 360-Degree Perspective™ model enables our clients to gain a comprehensive, action-oriented understanding of market evolution and its implications for their companies' growth strategies. As illustrated in Chart 5 below, the following six-step process outlines how our researchers and consultants embed the CEO 360-Degree Perspective™ into their analyses and recommendations.

**Chart 5: 360 Degree Perspective™ Model**



## Critical Importance of TEAM Research

Frost & Sullivan's TEAM Research methodology represents the analytical rigor of our research process. It offers a 360 degree view of industry challenges, trends, and issues by integrating all seven of Frost & Sullivan's research methodologies. Our experience has shown over the years that companies too often make important growth decisions based on a narrow understanding of their environment, leading to errors of both omission and commission. Frost & Sullivan contends that successful growth strategies are founded on a thorough understanding of market, technical, economic, financial, customer, best practices, and demographic analyses. In that vein, the letters T, E, A and M reflect our core technical, economic, applied (financial and best practices) and market analyses. The integration of these research disciplines into the TEAM Research methodology provides an evaluation platform for benchmarking industry players and for creating high-potential growth strategies for our clients.

**Chart 6: Benchmarking Performance with TEAM Research**



## About Frost & Sullivan

Frost & Sullivan, the Growth Partnership Company, enables clients to accelerate growth and achieve best-in-class positions in growth, innovation and leadership. The company's Growth Partnership Service provides the CEO and the CEO's Growth Team with disciplined research and best-practice models to drive the generation, evaluation and implementation of powerful growth strategies. Frost & Sullivan leverages 50 years of experience in partnering with Global 1000 companies, emerging businesses and the investment community from more than 40 offices on six continents. To join our Growth Partnership, please visit <http://www.frost.com>.