

2009 Global Diabetes Diagnostics
Frost & Sullivan Excellence in Research Award

EpineX Diagnostics Inc.

Frost & Sullivan confers the 2009 Global Excellence in Research Award in the Global Diabetes Diagnostics Market on EpineX Diagnostics Inc. (EpineX) for developing an innovative rapid test (the G1A™ test) for diabetes management in type 2 and gestational diabetes patients. EpineX specializes in the development of innovative rapid tests by identifying unmet needs in the existing healthcare market.

The current methodologies used for diabetes monitoring are inadequate. One of the main drawbacks of the current blood glucose monitoring test is the inability to measure glycation, the underlying cause of diabetes complications. On the other hand, the glycated hemoglobin HbA1C test, which is considered the gold standard for glycation measurement, can only be used every 3 to 6 months due to the longer turn-over period for red blood cells. EpineX believes that this testing interval is too long to meaningfully assist doctors and patients in effectively monitoring and controlling the patient's condition. Numerous scientific studies have confirmed that glycated albumin is a better indicator of glycemic control where red cell complications are present compared to HbA1C. It is also recommended especially for gestational diabetes and for diabetics who undergo hemodialysis.

Glycated Albumin

Diabetes has evolved into a global epidemic. Uncontrolled diabetes leads to severe complications such as kidney failure, heart disease, blindness and nerve disorders. Therefore, long-term management of diabetes is essential to avoid these complications. For this purpose, protein glycation is considered an effective method to monitor the damage being caused by diabetes. The glucose molecules bind to the proteins in the body causing damage to different organs in the body. Therefore, diabetics must monitor the way in which the sugar is processed in their body. Since the glycation of proteins can be monitored in-vitro, diabetes monitoring tests that indicate the progression of diabetes and diabetes-related damage using serum protein are preferred.

EpineX Diagnostics believes that the development of a glycated albumin test is a breakthrough for diabetes monitoring. Albumin is the most widely found protein in the serum and is replaced in the body every 20-25 days. Measurement of glycated albumin monitors diabetes complications by showing damage to proteins over the previous 2-3 weeks. As with other proteins in the body, albumin is subjected to glycation by excess glucose. A comparison of glycated albumin with total albumin provides a stable index of glycation over a month's period.

EpineX Solution: G1A™ Rapid Diabetes Monitoring Index Test

EpineX Diagnostics has developed a rapid immunoassay system that provides an index of the level of protein glycation in the body by simultaneous measurement and comparison of glycated albumin with total albumin in the body. The test is under development and awaiting patents in the U.S, EU, Canada, Japan and Hong Kong.

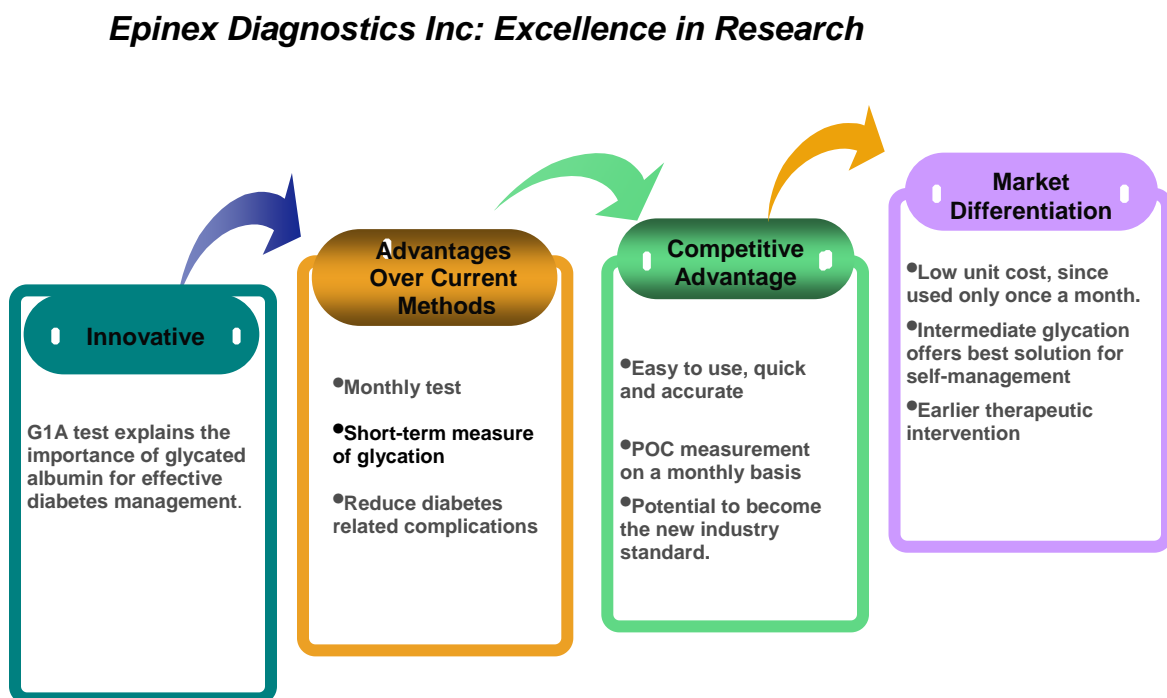
The test is performed with a handheld device. A drop of whole blood is placed on the test strip inside a test cassette, the cassette is inserted in the reader, and the results are displayed within 5 minutes. In comparison to the HbA1C test, the G1A™ test offers more accurate prediction of glycation every month as opposed to quarterly.

An endocrinologist survey conducted in the United States by Epinex details the current monitoring methods used for type 2 diabetics and reveals the unmet needs in the market. Epinex received positive feedback to the G1A product concept from the respondents. Studies conducted by Epinex also revealed that diabetes professionals strongly support the need for intermediate glycemic control for screening as well as for diabetes monitoring. Similar studies were conducted to emphasise the importance of glycated albumin in gestational diabetes, diabetics on hemodialysis, diabetics with red cell disorders and geriatric diabetics.

Epinex has also studied the market opportunity for the test. Their study shows that the G1A™ test has the potential to substantially decrease the need for daily monitoring of glucose for non-insulin dependent diabetics if a rapid test for glycated albumin were available. The G1A™ test may also predict the onset of coronary artery disease in type 2 diabetics. The market opportunity for this test lies in enabling lifestyle modification and preventing the onset of diabetes complications at an early stage. Competitive advantage is gained as an effective diabetes management tool for use at home or in the physician’s office that can aid in long-term management of the disease as well as reduce the need for multiple monitoring of glucose for type 2 diabetics.

The chart below illustrates why the Frost & Sullivan Global Excellence in Research Award was determined to go to Epinex in the Global Diabetes Diagnostics Market for the year 2008.

Chart 1.1 Diabetes Diagnostics Market: factors contributing to Epinex’s Excellence in Research Award (Global), 2008



Conclusion:

EpineX has used existing immunoassay technology to develop an innovative rapid test for a superior but previously unavailable marker (Glycated albumin) to create a breakthrough in the diabetes diagnostics market. EpineX is expected to continue to invest in research and development to generate technologically advanced solutions in the future as well. The company is expected to expand globally as it continues its development of innovative cost-effective diagnostic tools. Based on these cumulative factors, the 2009 Frost & Sullivan award for Global Excellence in Research is presented to EpineX Diagnostics in the Global diabetes diagnostics market.

Award Description

Frost & Sullivan's Excellence in Research Award is bestowed upon a company that has carried out new 'disruptive' research; and has, in general, a strong commitment to research and development. This award recognizes a company's research and development program that has or is expected to bring significant contributions to the industry in terms of adoption, change, and competitive posture. The fruits of this research may already have or will potentially impact certain market sectors. The award also recognizes the company's overall research excellence as well as its commitment toward differentiating itself based on science-backed services or solutions.

Research Methodology

To choose the award recipient, Frost & Sullivan's analyst team tracks research and innovation in key hi-tech markets. The selection process includes primary participant interviews and extensive primary and secondary research via the bottom-up approach. The analyst team creates a shortlist of candidates on the basis of a set of qualitative and quantitative measurements. The analysts also consider the pace of research and technology innovation, and the significance or potential relevance of the research to the overall industry. The ultimate award recipient is chosen after a thorough evaluation of this research.

Measurement Criteria

In addition to the methodology described above, there are specific criteria used to determine the final rankings. The recipient of this award has excelled based on one or more of the following criteria:

- Number or type of research projects
- Significance of research in the industry, and across industries (if applicable)
- Absolute R&D expenditures (vis-à-vis industry norm), and % growth (if applicable)
- Caliber/reputation of research staff
- Potential of products of research to become industry standard(s)
- Breadth of intellectual property ownership (patents, scientific publications, papers in peer-reviewed journals, and so on)

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Frost & Sullivan Best Practices Awards recognize companies in a variety of regional and global markets for demonstrating outstanding achievement and superior performance in areas such as leadership, technological innovation, customer service, and strategic product development. Industry analysts compare market participants and measure performance through in-depth interviews, analysis, and extensive secondary research in order to identify best practices in the industry.

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