

Microneedles in Medicine

*Technology, Markets and Prospects*



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associates

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Advances in materials processing technologies such as micromachining, nanoprocessing and structured film forming are creating new devices and new opportunities for minimally invasive medicine

By penetrating the stratum corneum, microneedle systems can effectively sample analytes or deliver drugs with minimal discomfort

Microneedle arrays worn on the skin extend the range of drugs that can be delivered transdermally and improve patient compliance

Partnerships between device designers and healthcare product providers will be a key success factor for microneedle medical devices

Greystone Associates is pleased to announce the publication of a new market study. **Microneedle in Medicine: Technology, Markets and Prospects** is a comprehensive evaluation and analysis of the technology, diagnostics, therapies, and product development strategies that comprise the emerging microneedle segment of the medical device sector.

Published in December (2007), the study is designed to provide medical company decision makers, technology developers, drug delivery and diagnostic market participants, and industry strategists with a detailed understanding of the technology landscape, business risk factors, and market potential of medical applications for microneedle devices. Provider organization business managers, healthcare administrators and investors will also benefit from this publication.

#### **Microneedle Technology and Minimally Invasive Medicine**

Advances in the processing of materials on a micro-scale have led to the development and introduction of devices that employ very small needles – microneedles – that have significant potential in devices for diagnostics, healthcare monitoring and drug delivery by mechanically perforating the outer skin layer and allowing for transdermal drug absorption or fluid sampling. These processing techniques incorporate one or more technologies that enable the precise machining, extrusion, casting, and/or forming of from one to an array or grid of microneedles.

Several factors - include an aging patient population, biological drug therapies for chronic conditions, and an emphasis on patient self-monitoring and self-care – are driving an evolution in the way that healthcare is delivered. Evolving microneedle systems will be well-positioned to address a significant segment of the large –molecule biological drugs expected to emerge from the convergence of automated discovery and genome mapping. Before microneedles find widespread use, researchers must perfect the techniques for optimally inserting them into the skin, and complete the integration of microneedles into a full diagnostic, monitoring or drug delivery system.

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(abridged)

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### Market Factors

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### Microneedle Company Profiles

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## ***Market Data***

The study presents qualitative and quantitative data and information on key market measures and benchmarks:

- Microneedle Market Segment Analysis
- Market Dynamics and Sensitivities
- Microneedle Technology Economic Factors
- Technology Enablers
- Development Status
- Commercial Strategies
- Third-party Stakeholders
- Market Participant Profiles
- Device-Pharma Alliance Activity and Deal Structure
- Competitive Risks
- Proprietary Technology
- User Issues
- Technology Risk Factors
- Regulatory Risk Factors

Forecasts and projections cover the period from 2007 to 2010.

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## **Methodology**

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Research methodology is based on primary research in the form of in-depth interviews with key market participants, technology developers, supply chain participants, industry experts, and market influencers, a list that includes regulatory officials, industry trade groups, and standards organizations.

Primary data is evaluated and normalized against secondary sources including trade journal articles, technical literature, industry publications, company data sheets and published information, and statistical data from government agencies and trade associations.

Forecasts and projections of market demand and future market activity are derived using standard modeling and statistical techniques.

## Feature Summary

- Analyzes and evaluates microneedle technology and product research and development, and assesses the medical market potential for existing and probable future products
- Analyzes proprietary technologies and market development issues
- Provides detailed descriptions of medical microneedle business opportunities, market demographics, and business strategies
- Charts product sales data, market share, and forecasts to 2010
- Profiles microneedle medical product and technology participants, their activities, business strategies, and corporate alliances and affiliations
- Assesses the importance of licensing, alliances and partnerships on the success of medical applications for microneedles
- Evaluates the impact of economic, technology, and regulatory factors on the commercial potential of microneedle systems

## Report Format and Availability

This report is available in hard copy or electronic format. A site license for a single physical location and a global license are also available. Publication is scheduled for the first half of December, with availability to subscribers on or before December 15<sup>th</sup>.

## About Greystone Associates

Greystone Associates is a medical technology consulting firm focused on medical market strategies, product commercialization, venture development, and market research. We assist medical market participants in achieving their business objectives through the creation of detailed business development strategies, product commercialization programs, and comprehensive market and technology research and analysis.

Our market research publications are designed, researched and written to provide timely and insightful information and data on focused market segments, with the aim of providing market participants with the essential knowledge necessary to refine and execute their marketing plans and achieve their financial targets.

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## Microneedles in Medicine

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