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Biochips

US Industry Study with Forecasts for **2012 & 2017**

Study #2418 | November 2008 | \$4600 | 238 pages

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Growth in US biochip demand will be led by uses in drug discovery and epidemiological research, with protein characterization and analysis providing the fastest expanding technologies.

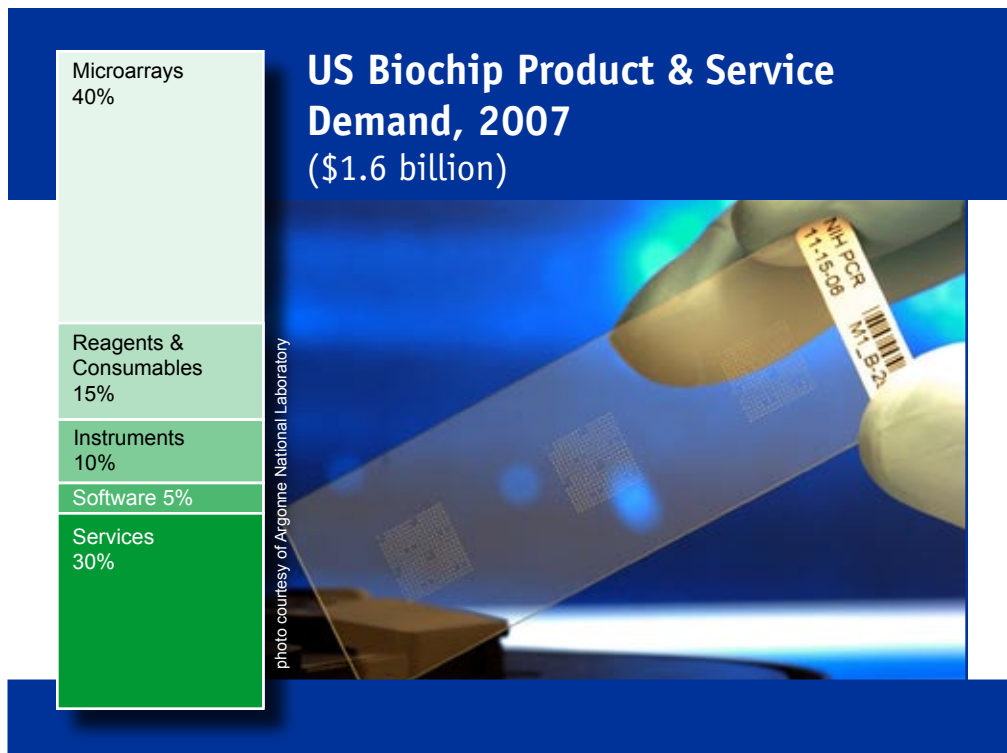
US demand to increase 9.9% yearly through 2012

US demand for biochip products and services is forecast to increase almost ten percent per year to \$2.5 billion in 2012. Biochips (or microarrays) will account for \$1 billion of this amount, with the remaining \$1.5 billion divided among related reagents and other consumables, instruments, software, and services.

Growth will be led by uses in drug discovery and epidemiological research, with protein characterization and analysis providing the fastest expanding technologies. In *in vitro* diagnostics testing, biochips will gain some applications as nucleic acid biomarkers based on speed and accuracy improvements, but will not penetrate other areas significantly due to cost disadvantages.

Protein, lab biochips among best prospects

Expanding efforts by pharmaceutical and other life science researchers to apply knowledge gained from the Human Genome Project (HGP) to commercial applications will create strong growth opportunities for biochips. DNA chips will continue to generate broad usage in genomic research. However, the shift of drug discovery and epidemiological research toward a greater focus on proteomics will create stronger growth opportunities for protein and laboratory biochips. Advances in characterization and analysis methods will expand the



range of protein microarrays available for drug screening and optimization and the identification of disease biomarkers. Adaptability to the simultaneous performance of multiple microarray experiments, coupled with performance advantages in life science data collection and measurement, will boost demand for laboratory biochips. Due to the increasing complexity of microarray investigations, biochip reagents and consumables -- especially labeling kits -- will post strong growth in demand.

Biochip software demand to rise at strong pace

The market for biochip instruments is projected to grow 6.1 percent annually

through 2012. Growth will decelerate from the historical pace as the potential customer base moves toward greater saturation. Based on convenience and efficiency advantages, workstations that combine sample preparation, hybridization and detection will post the strongest gains in demand among biochip instruments. Demand for biochip software will rise at a strong pace as researchers purchase more sophisticated open programs with broader data collection and analysis capabilities. Software that interfaces with public genomic and proteomic databases will fare particularly well in the marketplace as life science researchers continue to study HGP results.

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Sample Text, Table & Chart

BIOCHIP MARKETS

Biotechnology Companies

Demand for biochip products and services among bio companies is forecast to grow significantly to \$1.6 billion by 2012. This market segment is expected to grow as advances in genomics and proteomics identify new drug targets and the transition to recombinant DNA technology continues. To attract investment from outside investors, many biotechnology companies and research firms will locate in biotech parks, which provides a means for new therapies with strong potential.

SAMPLE TEXT

The US biotechnology industry includes about 9,000 companies seeking to develop commercial products based on one or more sciences. Many of these enterprises have yet to introduce products or show a profit. Of the more than 27,000 developmental stage concerns that have participated in the biotechnology pharmaceutical field since the early 1970s, only Amgen and Genentech have evolved into major multinational drug producers. Most other firms in the industry are operating in weak financial positions and experience periodic difficulty in attracting outside investment. Accordingly, the biotechnology market for biochip products and services will remain relatively limited, with only a small percentage of participants providing significant revenue opportunities.

Two factors will impact growth opportunities for biochip products and services among biotechnology companies. Demand will benefit from the increasing use of research and development outsourcing by proprietary pharmaceutical producers. This trend will make more outside funding available to the biotechnology industry to engage in drug and, to a lesser extent, diagnostic discovery activities.

The second factor that will affect the level of demand for biochip products and services in the biotechnology industry will be the amount

TABLE V-2

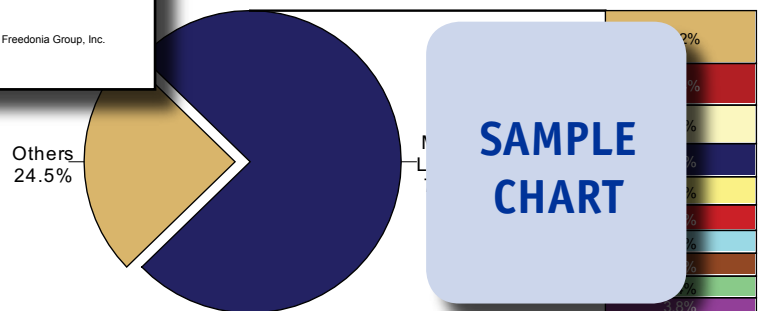
DRUG DISCOVERY DEMAND - BIOCHIP PRODUCTS & SERVICES (million dollars)

Item	1997	2002	2007	2012	2017
Drug Discovery R&D Expend (bil \$)					
\$ drug discovery/000\$ expend					
Drug Discovery Demand					
Biochip Products:					
Biochips (Microarrays)					
Reagents & Consumables					
Instruments					
Software					
Biochip Services					
% drug discovery					
Biochip Products & Services					

SAMPLE TABLE

CHART VII-1

BIOCHIP PRODUCTS & SERVICES MARKET SHARE BY COMPANY, 2007 (\$1.6 billion)

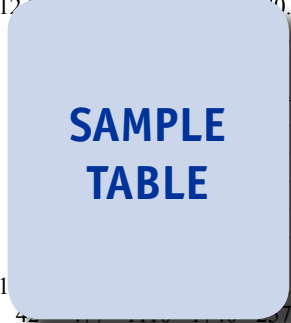


SAMPLE CHART

Sample Profile, Table & Forecast

TABLE IV-7
BIOCHIP REAGENT & CONSUMABLE
DEMAND BY APPLICATION
 (million dollars)

Item	1997	2002	2007	2012	2017
Biochip (Microarray) Demand	12.0	12.0	12.0	12.0	12.0
\$ reagents & consumables/\$ biochips	4.0	4.0	4.0	4.0	4.0
Biochip Reagents & Consumables	0.0	0.0	0.0	0.0	0.0
Gene Expression	0.0	0.0	0.0	0.0	0.0
SNP Identification & Genotyping	0.0	0.0	0.0	0.0	0.0
Other DNA Analysis	0.0	0.0	0.0	0.0	0.0
<i>In Vitro</i> Diagnostic Testing	0.0	0.0	0.0	0.0	0.0
Other Applications	0.0	0.0	0.0	0.0	0.0
% reagents & consumables	1.0	1.0	1.0	1.0	1.0
Biochip Product Demand	4.0	4.0	4.0	4.0	4.0



COMPANY PROFILES

Caliper Life Sciences Incorporated
 68 Elm Street
 Hopkinton, MA 01748
 508-435-9500
<http://www.caliperls.com>

Revenue
 US Revenue
 Research
 Employees

Key Products
 nucleic acids

Caliper Life Sciences is a leading lab-on-a-chip microfluidic technologies. The Company uses its proprietary technologies to produce LABCHIP microfluidic products and instrumentation systems. Primary markets for the Company's technologies and products include such research-based industries as pharmaceuticals, biotechnology and chemicals.

Caliper Life Sciences participates in the biochips industry through the manufacture of LABCHIP microfluidic products. In 2007, the Company's LABCHIP and other product revenue was \$83 million. LABCHIP systems are offered as biochip kits that miniaturize, integrate and automate many laboratory processes. These systems are intended to provide improved data quality and accuracy, enhanced sensitivity, and reduced reagent and labor costs. Caliper Life Sciences licenses certain LABCHIP technologies to such third parties as Affymetrix Incorporated (Santa Clara, California) and Wako Pure Chemical Industries Limited (Japan).

SAMPLE PROFILE

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"Demand for biochip products and services in SNP identification and genotyping will reach \$355 million in 2012, up 7.7 percent annually from 2007. Expanding use in epidemiological and agricultural research will account for the most growth. Competition from proteomics, especially in drug discovery and diagnostic targeting, will moderate overall gains in the value of demand."

--Section III, pg. 59

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OTHER STUDIES

Cardiac Implants

US demand for cardiac implants will grow 8.8% yearly through 2012, rebounding from a slowdown caused by product recalls and safety controversies. Pacing devices will remain the top-selling group, with gains led by CRT devices. Stents and accessories will be the fastest growing segment, driven by improved designs with reduced risk of complications. This study analyzes the \$10.7 billion US cardiac implant industry, with forecasts for 2012 and 2017 by type and indication. It also evaluates market share and profiles industry players.

#2398.....09/2008..... \$4500

Cosmetic Surgery Products

US cosmetic surgery product demand will grow 8.4% yearly through 2012, driven by an ongoing desire for a youthful appearance and an aging population. Less invasive procedures (e.g., injections, laser dermal resurfacing) will grow the fastest. Implants and other surgical products will do well where there are no alternatives. This study analyzes the \$1.9 billion US cosmetic surgery product industry, with forecasts for 2012 and 2017 by procedure, product and raw material. It also evaluates market share and profiles industry players.

#2389.....09/2008..... \$4600

Patient Monitoring Systems

US demand for patient monitoring systems will grow 5.9% annually through 2012. Accessories will be the fastest growing segment, driven by blood glucose testing strips. Growth in the equipment sector will be based on strength in remote monitors that transmit data via the Internet or telephone, and in home use devices. This study analyzes the \$9 billion US patient monitoring system industry, with forecasts for 2012 and 2017 by product and market. It also details company market share and profiles major players.

#2323.....04/2008..... \$4600

Food Safety Products

US demand for food safety products will grow 6.5% annually through 2012, driven by rising food safety concerns and new rules and regulations. Disinfection products will remain the largest segment and benefit from relatively new technologies such as ultraviolet and ozone equipment. Smart labels and tags will be the fastest growing products. This study analyzes the \$2.3 billion US food safety product industry, with forecasts for 2012 and 2017 by product and market. It also details market share and profiles major firms.

#2314.....04/2008..... \$4500

Pet Health: Products & Services

Total US spending on pet health products and services will grow 7.1% yearly through 2011. Services such as veterinary care, lab testing and pet insurance will outpace products. Dietary supplements will be the fastest growing product as pet owners look for ways to improve the health and lengthen the lifespans of their companion animals. The study analyzes the \$21 billion US pet health industry, with forecasts for 2011 and 2016 by type, condition and animal. It also evaluates market share and profiles major providers.

#2289.....02/2008..... \$4500

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