



## Background

Israel's life sciences industry is recognized as a fast-growing, vibrant force with a strong global reputation, yet Israeli companies have been producing medical devices and pharmaceuticals for more than a century. Teva Pharmaceutical, the first Israeli pharma company, was established in 1901. By 1994, there were 88 life sciences companies—and from that point, the industry took off.

The advent of advanced technologies in the late 1990s changed the face of Israel's life sciences industry. With proven capabilities in electronics, communications, computer science, and electro-optics, the country's scientists and engineers joined forces to take medical devices to a new level and to introduce world-class innovations in digital imaging, medical lasers, electro-medical devices, telemedicine, surgical equipment, diagnostic kits, and rehabilitation equipment.

Growing steadily over the past decade, today there are around 700 active life sciences companies with approximately 50 new companies starting up each year. Between 2001 and 2004, more companies were established in life sciences than in any other industry in Israel. Factors contributing to the success of this burgeoning industry include cooperation between academia and business, an entrepreneurial spirit, and a highly skilled workforce.

### A world marketer

Israeli life sciences companies export their products around the world, with main markets in the United States and the EU. Some companies establish subsidiaries in the United States or other locations for marketing and sales; others for strategic alliances for marketing, distribution, manufacturing, and service.



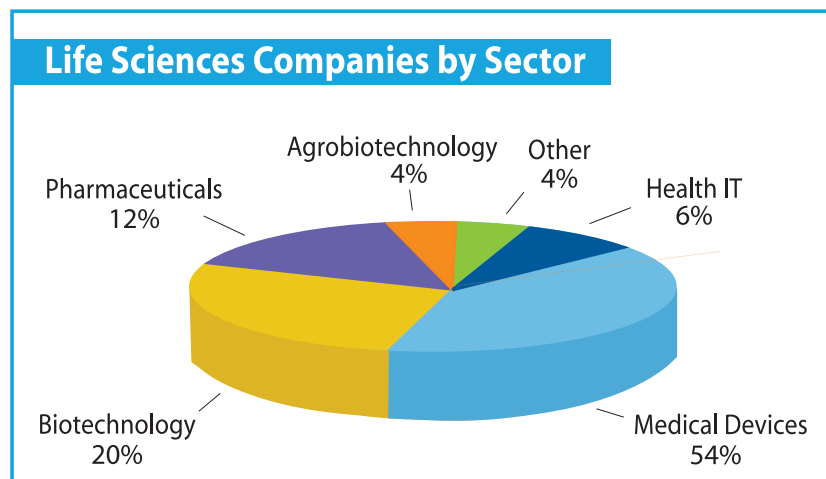
## Israel's Life Sciences by the Numbers

Israel ranks fourth in the world in biotechnology patents granted per capita—after Japan, Germany, and the UK—and is the per capita leader in medical device patents. Medical device companies represent more than 54% of the country's estimated 700 life sciences companies, with biotechnology the second largest sector.

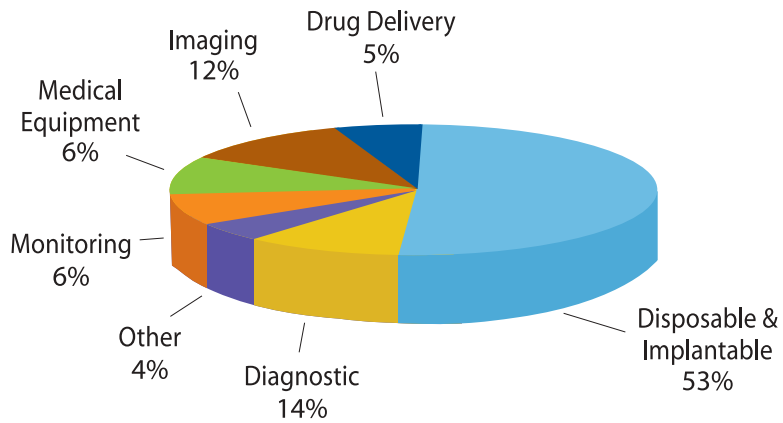
Although half of the country's life sciences companies are less than five years old, 40% generate revenues. In 2004, exports reached \$1.1 billion from medical devices and \$1.5 billion from pharmaceuticals and biotechnology—a total of \$2.6 billion comprising 11.5% of Israel's total industrial exports.

In the first nine months of 2005, pharmaceutical exports reached \$1.76 million, an increase of 54% over the same period in 2004. Medical device exports reached \$898 million, an increase of 20%. Total exports for the life sciences industry in the first three quarters of 2005, an increase of 39% over the same period in 2004. The geographical distribution of life sciences exports is North America, 63%; Europe, 27%; and Asia, 7%.

The life sciences industry employs 26,000 workers. Several well-established pharmaceutical companies focusing on generic drug production are among the country's largest employers.

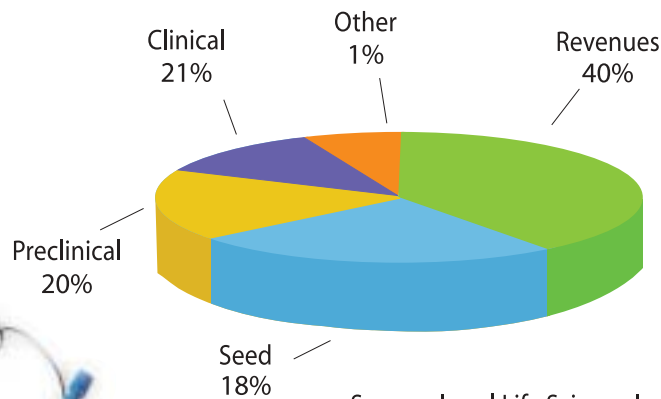


### Medical Device Companies by Category



Source: Israel Life Science Industry (ILSI)

### Life Sciences Companies by Stage



Source: Israel Life Science Industry (ILSI)



### Why Israel?

#### Extensive cooperation between academia, research, and business

World-class universities and research institutions such as the Technion-Israel Institute of Technology, the Weizmann Institute of Sciences, and the Hebrew University of Jerusalem, place Israel at center stage in life sciences research, particularly in



therapeutic drugs for cancer, autoimmune diseases, and central nervous system disorders.

There is a strong collaborative relationship between academia and business in moving cutting-edge research projects from the lab to commercialization. About 35% of academic research focuses on the life sciences and accounts for approximately 50% of academic research funding.

Fueled by the entrepreneurial spirit of Israel's medical professionals, the country boasts seven tech transfer organizations (TTOs) within the university system, five TTOs at hospitals, and a specialized TTO to advance the utilization of military technology for medical applications.

University TTOs focus on the process of taking advanced research projects out into the marketplace. One example is the joint efforts of Teva, Hadassit (the tech transfer company of Hadassah-Hebrew University Medical Center), and VCs to form a new model of cooperation between researchers and pharmaceutical companies to promote drug development, participate in clinical trials, and move toward commercialization.

In late 2005, the Hadassah Medical Organization and the Hebrew University of Jerusalem announced the launch of a biotechnology park in Jerusalem. Intended to provide incubator conditions for life sciences start-ups, the park is scheduled to open in 2007.

Tremendous investment in developing state-of-the-art technologies for defense has produced a group of highly advanced applications for the life sciences arena. Rafael Development Corporation (RDC) has established a think tank of medtech professionals to determine needs in the medical arena that can be solved with specific technologies from within Rafael, Israel Armament Development Authority. Both Given Imaging (developers of PillCam™, a video capsule endoscope) and Galil Medical (cancer cryo-therapy developer) resulted from this convergence.



### **Early adopters**

Many medical practitioners in Israel are themselves entrepreneurs active in developing cutting-edge medical products and technologies, and are heavily involved in clinical research. In addition, a number of hospitals have established TTOs to protect IP and promote commercialization of research done within the hospital system. The result: Israel's healthcare industry, and physicians in particular, are early adopters of new devices, products, solutions, and technologies.

### **Center of VC investment**

Investors from within Israel and from abroad see Israel as a strategic target for investment—one that has fueled the life sciences industry. The country's \$10 billion private VC industry of today had its start in 1992 when the Israeli government established a \$100 million venture capital fund. Investment in life sciences (as part of total investments) showed steady growth between 2000 and 2004. Israeli life sciences companies raised \$320 million in 2004.

### **Highly skilled, forward-looking workforce**

Israel has a highly skilled and educated workforce; 35% of the population age 25 to 64 has university degrees. It has more doctors, engineers, and scientists per capita than any other country.

### **Strong entrepreneurial spirit**

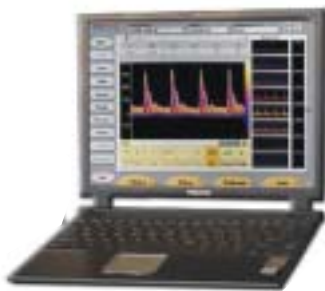
Israel is recognized as a source of ingenuity and innovation. It leads the world in the number of life sciences start-ups and medical device patents. Israeli developers are known for their ability to take risks and to solve problems and produce innovative solutions in relatively short periods of time.

### **Government incentives**

In 2004, an estimated \$800 million was spent on life sciences R&D activity. Of this amount, the Israeli government funded \$308 million.



Through the Office of the Chief Scientist (OCS) of Israel's Ministry of Industry, Trade & Labor, the Israeli government disperses hundreds of millions of dollars for R&D in companies of all sizes. In 2004, life sciences comprised 22.8% of all OCS grants. Israeli companies receive support and encouragement to develop joint projects with companies in the United States, Europe, and the Far East through a number of binational funds.



## Key Segments

Israeli companies are involved in a spectrum of solutions for a wide range of medical fields. Areas of primary focus include cardiovascular, operating room (OR) and emergency room (ER), neurology, oncology, obstetrics/gynecology (OB/GYN), orthopedics, ophthalmology, infectious diseases, wound management, and gastroenterology (GI).

### Medical devices

Israel is ranked second in the world for its medical device solutions.

Disposable and implantable, diagnostic, and imaging.

### Biotechnology

Israel is recognized as one of the world's leaders in academic research. Most Israeli biotechnology companies are in the R&D stage.

Drug discovery, genetics, cell and tissue therapy, diagnostic kits, biomaterial, and immunology.

### Pharmaceuticals

The majority of pharmaceutical activity is in generic drug development.

New chemical entities, natural materials, drug delivery, generic drugs, and chemicals.

### Health IT

Israel is advanced in integrating IT into the healthcare system; more than 90% of Israeli doctors use computers in their daily practice.

Software for patient safety, treatment, and management.

## About The Israel Export & International Cooperation Institute

The Israel Export & International Cooperation Institute, supported by over 2,600 member firms, private-sector bodies, and the government of Israel, advances business relationships between Israeli exporters and overseas businesses and organizations. By providing a wide range of export-oriented services to Israeli companies and complementary services to the international business community, the Institute helps build successful joint ventures, strategic alliances, and trade partnerships.

The Institute's website ([www.export.gov.il](http://www.export.gov.il)) provides information about the services that businesses need in order to succeed in commercial ventures with Israeli companies in the Israeli marketplace.

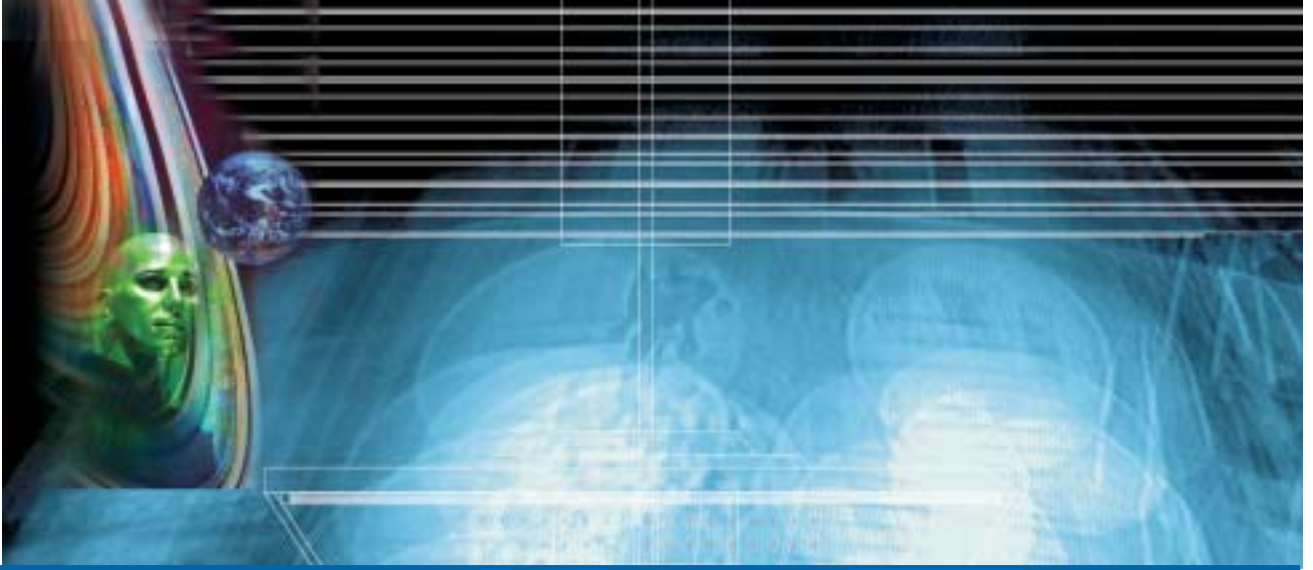


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