

# ISRAEL HIGH-TECH & INVESTMENT REPORT

A MONTHLY REPORT COVERING NEWS AND INVESTMENT OPPORTUNITIES  
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JOSEPH MORGENSTERN, PUBLISHER  
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## My Son the Doctor

In the 20th century, Jews, more than any other minority, ethnic or cultural, have been recipients of the Nobel Prize, with almost one-fifth of all Nobel laureates being Jewish. Of the total Israel has six Nobel laureates.

A total of nearly 700 individuals and 20 organizations have been Nobel recipients.

Jewish names appear 127 times on the list, about 18 percent of the total.

Of these 48 have been awarded for achievements in the fields of medicine and biomedicine. It is estimated that about one-third of the faculty at Harvard Medical School is Jewish.

A 12th century physician Moshe ben Maimon-Rambam (Maimonides) is the role model for a generation of Israeli physicians who became active not only in the care of the sick but in the development of treatments and medical systems. Israeli researchers and developers developed the first fully computerized, no radiation diagnostic instrumentation for breast cancer.

An Israeli company developed a computerized system for ensuring proper administration of medications, thus removing human error from medical treatment.

Israel's Given Imaging developed the PillCam - the first ingestible video camera, which is so small it fits inside a pill. Used to view the small intestine from the inside, the camera helps doctors diagnose digestive disorders of the small intestine and esophagus without invasive treatment.

C2Cure is producing disposable miniature imaging medical devices. The viewing systems consist of miniature, disposable video camera and a light source that are assembled on the tip of endoscopes. The technology is suitable for minimally invasive surgery (MIS) endoscopic market and the intra-vascular segment.

A new acne treatment developed in Israel causes acne bacteria to self-destruct - all without damaging surroundings skin or tissue.

A new brain implant has been developed in Israel that can lower the risk of stroke, by diverting blood clots away from sensitive areas of the brain.

Primate research at Hebrew University is leading to the development of a robotic arm, that can respond to the brain commands of a paralyzed person.

Two Israeli researchers are creating cancer-killing molecules that will recognize cancerous cells and target them aggressively, while not affecting normal cells.

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### My Son the Doctor

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Israeli researchers developed a novel stem cell therapy to treat Parkinson's Disease - using a patient's own bone marrow stem cells to produce the missing chemical that enable the restoration of the motor movement. Insightec developed an ultrasound system for removing tumors without surgery.

Researchers at the Technion have developed an antibiotic that destroys anthrax bacteria as well as the toxins it secretes into the bloodstream of the infected body.

At the recently held Biomedical Israel 2006 conference held in Jerusalem Prof. Rafael Beyar, a developer of cardiac stents has chosen a cross-section of 17 medical companies which we present in this month's report.. These include cardiovascular imaging and image integration, heart failure and cardiac arrest, pharmaceutical cell and gene therapy. Many of these companies are seeking additional funding to further their activities.

### **Teva Pharmaceuticals to Invest \$6 Million in CureTech**

CureTech, an Israeli biotechnology company specializing in development of innovative cancer drugs, has finalized a deal in which Teva Pharmaceuticals would invest \$6 million in CureTech, based on the company's potential value of \$64 million.

According to the agreement, Teva has received an option of investing an additional amount of \$22 million and increasing its stake in the company. This amount would allow full development of their flagship product, the CT-011 antibody, as well as registration in both Europe and the United States.

In addition, upon registration of the drug, Teva would hold the option of purchasing the remainder of the stakes and options in the company from the current holders for an amount of up to \$160 million, an amount reflecting a company value of \$210 million.

According to Ruben Krupik, Chairman of CureTech, "Teva's investment in CureTech is a serious vote of confidence in the potential of the products we are developing. We believe that Teva's addition would contribute greatly to the development and growth of CureTech."

According to Dr. Michael Schickler, CEO of CureTech, who served in the past in management positions in Pharmos and as a scientist at Hoffman-La Roche, "The unique agreement structure allows CureTech to focus on promoting its products and bringing them to market, and at the same time to maximize the company's value to its investors.

CureTech, established in 2001, is based on technology, which originated from the laboratories of Dr. Brita Hardy and Prof. Abraham Novogrodski of Tel Aviv University.

### **Marvell expands Israeli R&D activity**

Chip manufacturer Marvell Technology Group (Nasdaq: MRVL) has announced that it plans to substantially expand its R&D activities in Israel with the hiring of 100 engineers and R&D professionals. The company has already hired dozens of new employees over the last few months.

Marvell's R&D group in Israel includes Marvell Semiconductor Ltd., (formerly Galileo Technology Ltd.), which it acquired in a \$2.5 billion share swap transaction, and Radlan Communications (formerly part of the Rad Group), which it acquired for \$134.7 million.

Marvell currently employs 620 people in Israel, 25% of

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its global workforce. It has invested tens of millions of dollars in the Marvell Israel Semiconductor laboratories at Yokneam.

Marvell recently reported record results for the first quarter of fiscal 2007, which ended on April 29, 2006. The company's first quarter revenue soared to \$521.5 million, a 42.9% increase compared with the corresponding quarter in 2005. The results point to a continuation of the trend for the 34th consecutive quarter. Marvell also raised its revenue guidance for fiscal year 2007 from \$2.25-2.30 billion, to \$2.37-2.45 billion, as a result of the expectation of a further increase in the Wireless LAN market. Marvell currently has a market cap of \$15 billion.

Marvell Semiconductor Israel VP and general manager Eliaz Lavi said, "The strong growth has had a substantial impact on R&D operations in Israel. We need a large number of excellent engineers and R&D professionals, since our R&D activity here provides the foundations for most of Marvell's newer products, while maintaining a strong level of integration between our center and the group's R&D operations in California and other countries."

### Israel to launch contactless transit-fare cards

The Israeli government plans to introduce a contactless fare-payment system for all public transit in the country, and Israel-based On Track Innovations Ltd. has received a contract to supply contactless smart cards for use in the program. Ohad Bashan, president and CEO of OTI America, OTI's U.S. subsidiary said that the program will enable passengers to use the same card to pay fares on Egged, Israel's largest bus company; Dan, the bus company that serves the central area; and Israel Railways, the country's national train system. Bashan adds that the government hopes to integrate the planned future light-rail systems in Tel Aviv and Jerusalem into the program as well.

### Spectranetics, BioScan to combine imaging technology with laser devices



Spectranetics Corporation (SPNC) announced that it has entered into a research collaboration with BioScan

Technologies Ltd., a privately held Israeli company.

The initial phase of the contract will focus on the feasibility of combining Spectranetics' fiber-optic laser catheters with the optical imaging technology of BioScan. If feasibility is proven, the project will move to a product development phase.

Spectranetics is a medical device company that develops and manufactures single-use medical devices used in minimally invasive surgical procedures within the cardiovascular system in conjunction with its proprietary excimer laser system. Excimer laser technology delivers relatively cool ultraviolet energy to ablate or remove arterial blockages including plaque, calcium and thrombus.

BioScan Technologies Ltd. is a privately held company. The main shareholders include funds represented by BioMedical Innovations Ltd. and private investors mainly from the medical technology industry. BioScan is developing SonarLight an optical ultrasonic technology for the use in minimally invasive diagnosis and treatment of cardiovascular and other diseases.

### Xacord Signs With Metaccord

Xacord, Inc. (PINKSHEETS: NNGY) (formerly Nanergy Corp.) announced that Metaccord Acquisition Corp., a newly-formed subsidiary of the company, has entered into a binding letter of intent to acquire all of the shares of Metaccord Inc., whose sole asset is Metaccord Ltd., an Israeli corporation specializing in platform software for the wireless and communications industries. Upon closing of the acquisition, Metaccord Inc. will be the surviving entity and will become a subsidiary of Xacord.

Established at the end of 2001, Metaccord Systems has developed an innovative software platform for the wireless, WiFi, Wide-Area WiFi and HotSpot industries to automate the delivery of third-party wireless services and content.

### Non-invasive imaging may allow precise diagnosis of coronary artery disease

A study focusing on a new non-invasive imaging technology--one that may enable more precise diagnosis of coronary artery disease and treatment tailoring in individual patients--was released by Israeli researchers at SNM's 53rd Annual Meeting June 3-7 in San Diego.

"This work presents a new non-invasive cardiac imaging technology for the assessment of ischemic

heart disease--also known as coronary artery or coronary heart disease--caused by the narrowing of heart arteries, which limit blood and oxygen from reaching the heart muscle," said Zohar Keidar, deputy director of the nuclear medicine department at Rambam HealthCare Campus in Haifa, Israel. "This new modality (or technique) enables--in a single imaging session--accurate evaluation of cardiac blood vessel narrowing and blood supply to the heart muscles," said the co-author of "Assessment of Hemodynamically Significant Coronary Artery Lesions--Initial Experience With an Integrated SPECT/CT Device." He added, "These initial results suggest that this novel non-invasive imaging technology will enable more precise diagnosis of coronary artery disease, thus leading to treatment tailoring in the individual patient who may be directed to either invasive or conservative medical procedures."

In the United States, cardiovascular disease is the leading cause of death for both sexes. Coronary artery disease is the most common cause of cardiovascular disease, and as many as 3 to 4 million Americans may have ischemic episodes without knowing it.

Myocardial perfusion (blood flow) imaging using single photon emission computed tomography (SPECT) is an established method for assessing the physiologic significance of coronary lesions in patients with chest pain, said Keidar. Computed tomography coronary angiography (CTCA)--an emerging technique for non-invasive detection of the narrowing of a blood vessel (coronary stenosis)--is an X-ray-based exam of the blood vessels or chambers of the heart. Cardiac SPECT/CT technology combines two imaging modalities of the heart in a single device: the CT coronary angiography--showing the cardiac vessels--and SPECT perfusion imaging--detecting blood flow abnormalities in the cardiac muscle, he explained. "To the best of my knowledge these are the first results of cardiac SPECT/CT used in a clinical setting," he added.

"These initial results indicate that cardiac SPECT/CT imaging enables the precise localization of an abnormal ischemic segment of the cardiac muscle in the responsible blood vessel, thus indicating if one or more coronary arteries are obstructed and can and should be treated," said Keidar.

"On the other hand, the combined information can also demonstrate that a narrowed blood vessel has no significant impact on patient's heart perfusion, thus eliminating the need for further invasive treatment," he added.

"Combining SPECT (physiological imaging) with CT (anatomical imaging) is a significant advance," said Josef Machac, SNM's Scientific Program Committee cardiovascular vice chair. "This work provides a more accurate picture of the severity of coronary artery disease," added the director of the Clinical PET Center and Nuclear Medicine at Mount Sinai School of Medicine in New York City.

### Ormat to build three plants in Canada



Recovered energy company Ormat Technologies Inc. (NYSE:ORA) said it received \$29 million in supply and construction orders to build three facilities in Western Canada. The orders, placed with two Ormat subsidiaries, entail building recovered energy generation

plants. The plants use technology to convert recovered heat from the exhaust of gas turbines into electric power. The emission-free plants are expected to be completed in 2007 or early 2008.

### Gilat to supply communications equipment to Angola

Gilat Satellite Networks Ltd. (Nasdaq: GILT) announced that it will provide communications equipment and services to Angola Telecom, one of the largest operators in Sub-Saharan Africa.

Gilat will provide the state operator with satellite modems, equipped with high-quality modulation systems and mechanisms for anticipating errors that "reduce the costs of satellite transmission."

In addition, the Israeli technology company will install an integrated satellite communications solution which will make it possible to, "expand the capacity of the existing fixed and cellular infrastructure."

Recently Angola's largest mobile communications operator, Unitel, said it would invest 41.5 million euros in expanding its GSM network.

The agreement between Angola Telecom and Gilat includes installing a radio access solution at several points all over the country which will make it possible to bring together GSM and 3G capacity, opening up the possibility of introducing third generation mobile communications into Angola in the future.

The number of cellular phone users in Angola rose 33 percent last year to 1.6 million people, according to figures from Angolan telecom regulator INACOM.

### Biomed Israel Conference 2006

The annual Biomed Israel conference, held from 29-31 May 2006, attracted delegates from both Israel and abroad to this showcase event for the Israeli life sciences industry. Academics, business leaders and researchers from European and American companies and universities led the list of keynote speakers whilst other noted presenters spoke on advances in treatments and technologies, and their visions of the new frontiers in the life sciences field.

### Israel, Finland form joint R&D fund



Israel and Finland unveiled a \$13 million joint research-and-development fund during a visit to Israel by Finnish industrialists and investors.

The venture, called Finland Israel Technology, will "support joint projects in all industrial R&D fields". Each country will provide half of the fund's budget.

During the delegation's visit Israeli Chief Scientist Eli Oppen and Nokia Vice President of Technology Policy Erkki Ormala discussed the establishment of closer R&D ties between Israel and Nokia.

The Finnish cell-phone company is currently working with Israeli semiconductor company Provigent, which deals with wireless broadband transmission.

### Oracle set to make first acquisition in Israel

Oracle (Nasdaq: ORCL) is about to acquire Israeli high-tech company Demantra for \$41 million in cash.



Demantra, develops demand-driven planning software solutions, ended 2005 with sales of \$20 million. The company is headquartered in Waltham, Massachusetts and has an R&D center in Ramat Gan, Israel which employs 30 people.

It signed numerous contracts with large companies and launched a new product range making it a supplier of a full set of planning solutions for product management. It also switched from marketing its products through a chain of resellers for direct sales to customers.

Oracle has never previously acquired a company in Israel. In 2005, the software giant signed a cooperation agreement with the Chief Scientist, with the goal of investing in start-ups and software solutions manufacturers. The cooperation between Oracle and

the Chief Scientist was agreed upon following a meeting between company president Safra Catz and the Minister of Trade, Industry and Labor.

Since the agreement was announced, Oracle and the Chief Scientist have made a joint investment in YaData, which develops software for market segment targeting and management solutions for large enterprises. In addition, Oracle is in the process of acquiring technology for database connectivity from Attunity.

### Israel up 22 places in world competitiveness rankings

Israel is ranked 20th among 61 countries in the 2006 world competitiveness rankings, produced by the World Competitiveness Center at Swiss business school IMD. Israel has risen 22 places in the rankings from 42nd in 2005. In the general rankings, which include government, bureaucracy, infrastructure and business sector activity, Israel is ranked 25th.

The US tops the list, followed by Hong Kong, Singapore, Iceland, and Denmark. Last placed countries are Romania, Poland, Croatia, Indonesia, and Venezuela.

Israel was ranked first in 2006 in R&D expenditure as a percentage of GDP, the same as in 2005. Israel is also ranked first in public spending on education as a percentage of GDP, up from third place in 2005.

Israel is also ranked third in IT, up from fifth place in 2005; fourth in skilled manpower, up from tenth place; sixth in openness to the global market, up from 13th place; and seventh in Noble Prize laureates relative to total population, up from ninth place.

The World Competitiveness Yearbook is published by Switzerland's IMD - International Institute for Management Development, one of the world's leading business schools. The yearbook ranks 61 countries according to 312 factors collated from economic institutes worldwide.

### Technion Researchers Develop System for Efficient Genetic Computations Using Thousands of Volunteer Computers

Technion researchers and students have developed a unique gene mapping system that enables carrying out complex computations using a wide-scoped, volunteer computer network that crosses

borders. The system – Superlink-Online – enables efficient identification of the possible location of a diseased gene in large families. This was revealed in the recent issue of the journal “American Journal of Human Genetics”.

The software assists researchers looking for a cure for genetic diseases. Only after the gene is identified, can the process begin of finding drug treatment for the disease.

Development was started some five years ago by Prof. Dan Geiger of Technion’s Faculty of Computer Science and Dr. Mayaan Fishelson. Over the last two years, the team of researchers and students has dealt with expanding the original software, which worked on a single computer, to work in parallel on many computers. This enables analysis that could not be carried out in the past.

“Today, the program is already running, in parallel, on 200 computers at the Technion and 3,000 computers at the University of Wisconsin-Madison,” says doctoral student Mark Zilberstein, who is working on the system’s development. “The system can be accessed as a service through the Internet and provides results tens of times faster than the previous program. For example, one of the runs finished after seven hours, while on a single computer it would have required a full year.”

“In the last half year, dozens of geneticists from Israel and abroad have used Superlink-Online, and thousands of runs have been recorded, totalling 70 computer years,” adds Prof. Assaf Schuster, head of Technion’s Distributed Systems Laboratory, which develops Superlink-Online’s required computational infrastructure.

In Israel, eight hospitals and genetic centers are already using Superlink-Online and the system has already assisted in finding a number of defective genes that cause skin diseases, as well as helping research additional genetic diseases.

### Anti-Parkinson’s Drug Obtains FDA Approval

There’s a new tool in the fight against Parkinson’s disease. The FDA has granted approval for Azilect® (Rasagiline), a drug developed by Technion-Israel Institute of Technology researchers. The drug will be available in the United States this summer, and will be marketed by Teva Pharmaceutical Industries, Ltd.

The brainchild of Technion Professors Moussa Youdim

and John Finberg, Azilect is the first once-daily product for the treatment of Parkinson’s, a chronic, degenerative disease affecting a million people in the United States (4 million around the world).

Azilect is one of the few treatment options in the U.S. for all stages of Parkinson’s, including use as a stand-alone early-stage therapy and in combination with levodopa, a standard treatment for Parkinson’s disease, in more advanced stages of the disease. The drug is a monoamine oxidase type-B (MAO-B) inhibitor that blocks the breakdown of dopamine, a chemical that sends information to the parts of the brain that control movement and coordination.

“The approval of Azilect by the FDA represents important news for people with Parkinson’s disease,” said Dr. Warren Olanow, professor and chairman of the Department of Neurology at Mount Sinai School of Medicine. “Patients can now look forward to an effective new treatment option that improves symptoms and offers the simplicity of once-daily dosing without having to carefully measure dosages.”

FDA approval is based on data from three large, multicenter, multinational, double blind, randomized, placebo-controlled clinical studies of more than 1,600 patients.

Teva has initiated a large clinical study to investigate the drug’s effect on slowing the progression of Parkinson’s disease.

### SciGen to set up \$30m facility in Rehovot



SciGen Israel will develop a hepatitis-B vaccine based on molecules bought from BioTechnology General.

Singapore generic company SciGen Ltd. (ASX:SIE) will set up an R&D and manufacturing facility in Rehovot at an investment of \$30 million over three years. The facility will be called “SciGen Israel”. SciGen had \$4.87 billion in sales in 2005.

Singapore businessman Saul Mashaal is the founder, executive vice chairman and CEO of SciGen.

SciGen Israel will develop vaccinations against hepatitis-B based on molecules SciGen bought from their discoverer BioTechnology General. BioTechnology General, which was the global biologics manufacturing business of Savient Pharmaceuticals, was acquired by

Swiss company Ferring in July 2005.

SciGen Israel will handle the R&D for the jaundice vaccine, which will be produced both in Israel and by SciGen's Chinese plant.

Two years ago, Serono (NYSE: SRA; SWX: SEO) closed its Rehovot facility, InterPharm Laboratories Ltd., which developed multiple sclerosis drug Rebif (interferon beta-1a).

Investment Promotion Center and Invest in Israel director Rachel Roei said Mashaal had considered investing in Singapore, India and Israel. She said Israel's human resources were the deciding factor in the final decision, and that the salaries of Israeli manufacturing workers were not a factor. SciGen Israel will rely on Israeli manpower, generating dozens of jobs.

The Economic Mission of Israel in Singapore commercial attaché Anat Katz said Mashaal told her that, although the Rehovot location would render SciGen ineligible for substantial benefits and grants (because Rehovot is not an outlying area), its human resources tipped the scales in favor of investment close to the Weizmann Institute of Science.

Founded in 1988, SciGen is a biotechnology company that specializes in endocrinology and immunology.

### **BGU to cooperate with Invitrogen to Produce Products for the Biotech/Pharma Market**



Ben-Gurion University of the Negev recently signed an agreement with Invitrogen Corporation to produce products for the Biotech/Pharma research and production market using an alginate scaffold developed

by Prof. Smadar Cohen. and her research team. According to the agreement with Invitrogen Corporation, an international biotech company will develop products that will be used to promote tri-dimensional cell growth, based on alginate scaffolds, a natural polymer derived from algae.

Prof. Smadar Cohen, chairperson of the Department of Biotechnology Engineering and a member of the National Institute for Biotechnology in the Negev, and her team developed a polymer scaffold made from the natural polysaccharide Alginate, a natural substance derived from algae. The unique process of creating

the Alginate scaffold enabled Prof. Cohen to create an extra-cellular matrix, possessing a porous shape and structure with mechanical reinforcement, enabling the preservation of its shape under the weight of the growing cells. The Alginate scaffold is used to create a wide range of different tissues, through the use of cells from different sources. An implantation of endothelium (a layer of thin, flat cells that lines the interior surface of blood vessels), enables the creation of capillary blood vessels. Cardiomyocytes implanted into the Alginate have been shown to start beating 24 hours after implantation. Prof. Cohen's team, has recently shown that the Alginate scaffold not only provides the optimal greenhouse for specific cells from different sources, but even helps stem cell expansion and differentiation.

Invitrogen Corporation provides products and services that support academic and government research institutions and pharmaceutical and biotech companies worldwide in their efforts to improve the human condition.

Invitrogen employs approximately 4,800 people worldwide with over \$1.2 B sales in 2005.

### **Israel planning "Arrow Mark 4"**

Israel Aircraft Industries Ltd. (IAI) subsidiary Elta Group, the Israel Air Force, and Ministry of Defense are designing components for the Arrow Mark IV, which will have qualitatively better performance than current versions. The Arrow upgrade is one response to the threat posted by conventional or nuclear armed Iranian ballistic missiles, says "Defense News", citing Israeli defense sources.

The Arrow Mark IV will have a new radar unit, improved interceptor missiles, and other components that will convert the system from a theatre anti-ballistic missile defense system into an integrated nationwide anti-ballistic missile defense system.

An official Ministry of Defense source said the new radar would turn the Arrow Mark IV into a completely holographic system, which will enable control of interceptor missiles from any location.

Elta is developing the Arrow Mark IV radar, the Green Pine I, which will have a much deeper monitoring range than the 700-kilometer range of the existing radar. The new radar is scheduled to enter operational service in 2009.

The Arrow upgrade program is part of Israel's preparations to counter Iran's efforts to develop and



produce nuclear weapons. In the coming months, Israel plans to launch its latest spy satellite, which will be able to spot changes on the ground in Iran, even in poor weather conditions and under cloud cover.

In a separate development, the Israel Navy is finalizing details of a contract with a German shipyard for two more submarines, which

will reinforce Israel's strategic deterrence capability, or launch a retaliatory strike against Iran from the sea in the event of a missile attack.

"Defense News" says that, in recent months, Israeli and US officials have increased the two countries' response coordination, in the event that diplomatic efforts to halt Iran's nuclear efforts fail

**Microsoft buys Israeli Whale for \$75m**



Microsoft (Nasdaq: MSFT) has acquired Israeli security software company Whale Communications for \$75 million. The details of the deal

have not been officially disclosed.

Whale was co-founded in 1998 by president Daniel Steiner and BRM Capital chairman Eli Barkat who also serves as Whale Communications chairman. It provides secure Virtual Personal Network (VPN) services using SSL encryption. The company has turned its focus to the communications market and is offering enterprises solutions for secure access to knowledge systems and enterprise applications. Whale was one of the first companies to focus on this field back in 1992.

Whale was listed in international accountancy firm Deloitte Touche's "Europe Fast 500" list of top companies in 2005. Its international sales and R&D centers are located at its headquarters in Rosh Ha'ayin, with two additional sales offices in Britain and France.

Whale's investors include venture capital firm exSeed Venture Capital, investment bank Goldman Sachs (NYSE: GS), Plenus Venture Lending Fund, and BRM Capital.

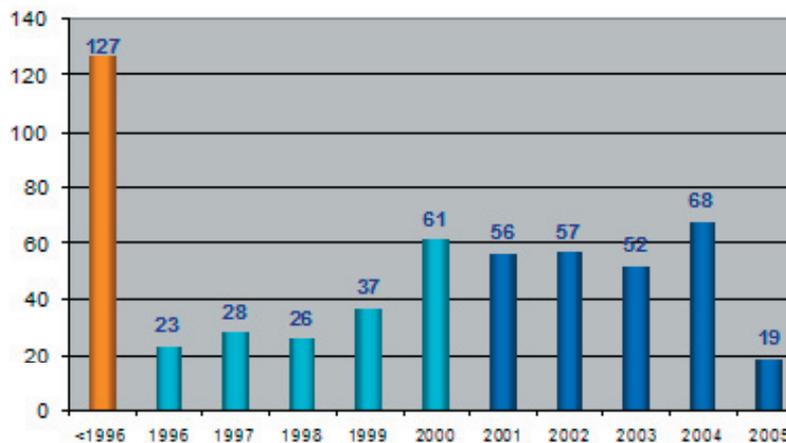
Microsoft's previous acquisitions in Israel include Maximal Innovative Intelligence, which it acquired in 2001 for \$20 million, and Peach Networks, which it acquired in 2000 for \$72 million. Peach was merged with the Microsoft TV division, which closed in 2002.

Microsoft has also hinted that it would be making an intensive entry to the information security field and the acquisition of company with an R&D capacity like that of Whale secure Internet access may well become Microsoft's first R&D center in a new strategic field, remote from the company's areas of business.

Prof. Rafael Beyar has chosen a cross-section of medical companies which we present below. These include cardiovascular imaging and image integration, heart failure and cardiac arrest, pharmaceutical cell and gene therapy. Many of these companies are seeking additional funding to further their activities.

**The Israeli Life Science Industry 1996-2005: A Decade of Growth**

The Israeli Life Science Industry is young, growing and exuberant. Of the existing 557 companies, 77% were founded during the last decade. A closer look reveals that almost half of the Industry (45%) was established in the last five years. Figure 1 depicts the trend and growth experienced by the industry in the 1996-2005 period. 127 companies were established prior to 1996, with the oldest one, Teva Pharmaceutical, founded in 1901.



From 1996 to 2000, the industry experienced significant annual growth equaling 19%. In 1996, the life science industry grew by 23 companies while in 2000 the industry saw its number increase by an additional 61 companies. In total, the industry grew by an additional 175 companies in the 1996-2000 period. In the past five years, industry growth has remained stable with approximately 50-60 new companies, added annually. Please note that data regarding the companies

established in 2005 is incomplete. Altogether, the industry experienced a 16% compounded annual growth in the decade of 1996-2005. It is important to note that Figure 1 depicts the number of companies established in each of the year and exists today.

## Leading Medical Technology Companies

### Atria Medical Inc

Sector: Medical Devices  
 Sub-Sector: Disposable; Implantable; Therapeutic Devices  
 Medical Field: Cardiovascular  
 Est.: 2004  
 Stage: Seed  
 Atria is a start-up company developing an implantable device to enhance and improve the clinical symptoms of Congestive Heart Failure patients by reducing pulmonary edema. The company's product is an implantable "valve" to control the intra-arterial pressure. The device is implanted by a minimally invasive procedure in the wall separating the two atria.  
 Contact Info:  
 Ori Ben Amotz  
 POB 3132 Caessaria 38900, Israel  
 972-4-632-7640/1

### Biobeat Medical Ltd.

Sector: Medical Devices  
 Sub-Sector: Diagnostic  
 Medical Field: Cardiovascular  
 Est.: 2004  
 Stage: Revenue  
<http://biobeatmedical.com>  
 Biobeat Medical develops and markets special ultrasound Doppler devices for transcranial (TCD) and peripheral vascular applications. The company's core technology is digital ultrasound Doppler, and its products are designed for measurements of blood flow velocities in the vessels of the brain and the peripheral circulation. The company's products include the SONARA, a fully integrated stand-alone system, and the SONARA/tek, a plug-in module that can connect to any PC via a USB connection. The products are regulatory approved, and Biobeat Medical conforms to the highest QA standards.  
 Contact Info:

Dr. Dan Manor, CEO  
[info@biobeatmedical.com](mailto:info@biobeatmedical.com)  
 P.O. Box 264, Kadima, Israel  
 972-9-744-1692  
 972-9-745-0621

### Bioscan Technologies

Sector: Medical Devices  
 Sub-Sector: Diagnostic  
 Medical Field: Cardiovascular  
 Est.: 2000  
 Stage: Clinical  
<http://www.bioscantech.com>  
 Bioscan is a start-up company focusing on the development of optical ultrasonic technology for the use in diagnosis and treatment of cardiovascular diseases. The company's platform technology, SonarLight, combines the use of a laser and ultrasound technology operating within a fiber optic. By utilizing laser to generate ultrasound, Bioscan is expected to be able to reduce the size of its ultrasound probe to that of an optic fiber thereby transforming the diagnosis and treatment of intravascular diseases. The low production costs of fiber optic technology will allow for competitive pricing of disposables compared to existing technologies.  
 Contact Info:  
 Avram Matcovitch, CEO  
 Ha'Carmel 5, Industrial Zone, Yokneam, 20692 Israel  
 972-4-993-7363

### DECOM Clinical Decision Support Ltd.

Sector: Medical Devices  
 Sub-Sector: Imaging  
 Medical Field: Cardiovascular  
 Est.: 2004  
 Stage: Seed  
<http://www.decomcds.com>  
 DECOM Clinical Decision Support Ltd. - a medical software company develops and offers the dCARDIO™ product suite - a patient-centric diagnostic image and information management solution to both OEMs and end users - cardiology group practices, small hospitals, imaging centers, and solo practitioners.

Incorporating data from diverse institutions, dCARDIO™ makes all patient's diagnostic images accessible at the point of care – Anytime and Anywhere. With dCARDIO™, review workstation functionality traditionally existing only in diagnostic labs, becomes available in every physician's office. The ability to maintain a personal image collection on physician's

laptop makes the product core functionality portable.

Due to its versatile architecture, the core product can be integrated with electronic medical record systems in a single application. As a result, physicians review, compare and analyze patient's diagnostic images along with the electronic medical record, facilitating the efficient detection of changes in the clinical situation.

The company's mission is to become a market leader in delivering diagnostic decision support tools for cardiology practitioners.

Contact Info:

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 972-3-534-8918

**TopSpin Medical Inc.**

Sector: Medical Devices  
 Sub-Sector: Imaging  
 Medical Field: Cardiovascular  
 Est.: 1999  
 Stage: Clinical  
<http://www.topspin.co.il>

TopSpin Medical has developed an IntraVascular MRI (IVMRI) catheter for local high-resolution MR imaging of the coronary arteries, which incorporates all magnetic field sources and eliminates the need for external magnets and a bulky and expensive MRI scanner. TopSpin's IVMRI catheter will potentially enable interventional cardiologists to guide therapy to vulnerable plaques.

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 imaging of the coronary arteries,..

**Rcadia Medical Imaging Ltd.**

Sector: Medical IT  
 Sub-Sector: Software and Hardware  
 Medical Field: Cardiovascular  
 Est.: 2003  
 Stage: Seed

<http://www.rcadia.com>

Rcadia is engaged in the development of SmartHeart – a software for automated CT Angiography (CTA) diagnostics for the detection, assessment and reporting of Coronary Artery Disease.

Rcadia specializes in CAD (Computer Aided Diagnostics) for blood vessel analysis applications. While the main focus is on coronary CTA, we aim to offer a wider range of solutions for additional clinical applications.

For the first time, CT scanners can image lesions of the native coronary arteries with unprecedented clarity and resolution - a vital and unique breakthrough in the radiology and cardiology fields. Rcadia's SmartHeart CAD will play a pivotal role in this revolution.

SmartHeart, Rcadia's CTA flagship product will assist cardiologists and radiologists in medical image analysis to:

Detect calcified plaque, soft plaque, stenosis & aneurysm

Measure the volume of plaque formations

Segment and locate blood vessels in CT studies

Measure the degree of stenosis/aneurysm

Map pathology locations in anatomical structures (segments)

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**Actelion Pharmaceuticals Israel**

Sector: Pharmaceuticals  
 Sub-Sector: New Chemical Entity  
 Medical Field: Cardiovascular  
 Est.: 2004

Stage: Revenue

<http://www.actelion.com>

Actelion is an independent biopharmaceutical company which brings to the market innovative treatments for diseases of endothelium through creative science. The company is rapidly growing due to successful marketing of multiple first-in-class small molecule compounds discovered, developed and registered by the company. In 2004 Actelion has opened an Israeli subsidiary.

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### **Vascular Biogenics Ltd.**

Sector: Pharmaceuticals  
Sub-Sector: New Chemical Entity  
Medical Field: Cardiovascular  
Est.: 2000  
Stage: Pre-Clinical  
<http://www.vbl.co.il>

Vascular Biogenics Ltd. (VBL) is a pharmaceutical company dedicated to the development of innovative therapies targeting the vascular wall. Its extensive vascular expertise is utilized in addressing the Cardiovascular and Cancer drug markets.

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### **MGVS**

Sector: Biotechnology  
Sub-Sector: Tissue Engineering & Cell Therapy  
Medical Field: Cardiovascular  
Est.: 2000  
Stage: Pre-Clinical

MGVS develops unique products for very large patient populations who cannot be treated adequately with current therapeutic modalities, with a focus on cardiovascular related syndromes. The Company's therapeutic products utilize the patient's own (autologous) vascular cells, modified by genes that are operative in natural vascular processes. MGVS currently has two products at different stages of development: 1) angiogenesis therapy for patients with arterial obstructive diseases of the legs and the heart; 2) bio-engineered grafts for use in bypass surgery in the legs and in hemodialysis access site. MGVS has recently closed a round of 4 million dollars, which will bring it to the conclusion of Phase I studies.

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### **GeneGrafts Ltd.**

Sector: Biotechnology  
Sub-Sector: Tissue Engineering & Cell Therapy

Medical Field: Cardiovascular  
Est.: 2003  
Stage: Seed  
<http://www.genegrafts.com>

GeneGrafts is a new biotechnology company, developing a novel therapy for atrial fibrillation (AF). Atrial fibrillation is the most common cardiac arrhythmia affecting 2.3 million Americans. Conventional therapy for AF is based on medications taken daily, with significant side effects. GeneGrafts is developing a cell therapy approach using autologous (extracted from the patient) genetically modified cells that are delivered to the patient's heart by catheterization. The treatment is localized and involves a single procedure.

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### **TheraVitae Ltd.**

Sector: Biotechnology  
Sub-Sector: Tissue Engineering & Cell Therapy  
Medical Field: Cardiovascular  
Est.: 2003  
Stage: Clinical  
<http://www.theravitae.com>

TheraVitae is an emerging healthcare company focused on using the patient's own cells in order to treat a variety of disorders, especially cardiovascular diseases. We are an international company, based in Bangkok, Thailand and Kiryat Weizmann, Israel, benefiting from collaborations with eminent physicians and scientists, affiliated with well-known medical and academic institutions. We are committed to helping our patients by developing and utilizing cutting-edge science at its highest standards.

TheraVitae offers novel, state-of-the-art therapies to people for whom existing medical procedures cannot be used or were not successful. We will offer hope to people who refuse to accept that they have been condemned to physical incapacitation, spending the rest of their lives in suffering because they cannot enjoy the latest medical technologies as the latter are not available to them in their country.

The company is at clinical development stage and focused on the development of cellular therapies for cardiovascular and other disorders. The first product developed by the Company is based on autologous (patient's own cells) endothelial progenitor cells and it

is in clinical trial for the treatment of angina pectoris.

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**NesStent Ltd.**

Sector: Medical Devices  
Sub-Sector: Disposable; Implantable; Therapeutic Devices  
Medical Field: Cardiovascular  
Est.: 2003  
Stage: Seed

NesStent Ltd is a start up company developing unique Stenting solutions and devices including: 1. A new stent concept for coronary bifurcations 2. A new catheter concept for precision delivery of stents to bifurcations or other hard to stent locations. 3. A novel stent to be inserted to the Carotid bifurcation diverting emboli in the Carotid artery, and by doing so prevent strokes.

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**B-Balloon Ltd.**

Sector: Medical Devices  
Sub-Sector: Disposable; Implantable; Therapeutic Devices  
Medical Field: Cardiovascular  
Est.: 2004  
Stage: Pre-Clinical  
<http://www.bballoon.com>

B-Balloon Ltd., an Israeli medical device start-up, develops dedicated stents and stent delivery systems that will safely allow the placing of stents in Ostial and Bifurcation lesions. These lesions are considered two of the biggest unresolved challenges in Percutaneous Coronary Intervention. Nevertheless, B-Balloon's devices are not limited to the coronaries and may be

used in other vessels.

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**Existent Ltd.**

Sector: Medical Devices  
Sub-Sector: Disposable; Implantable; Therapeutic Devices  
Medical Field: Cardiovascular  
Est.: 2003  
Stage: Seed

Existent is developing a new cardiovascular stent.

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**972-9-970-4318**

**Derio Medical Instruments Ltd.**

Sector: Medical Devices  
Sub-Sector: Disposable; Implantable;  
Medical Field: Cardiovascular



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