ISRAEL HIGH-TECH
& INVESTMENT REPORT

A MONTHLY REPORT COVERING NEWS AND INVESTMENT OPPORTUNITIES JOSEPH MORGENSTERN, Publisher
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An Export Industry that will Flourish

Even though Israeli defense exports are expected to fall by 10% for '08, Israel still ranks in the top 10 of global defense exporters. Depending on which list you go by, Israel is either in 4th or 8th place. Not bad for a small little country.

According to figures released by the US Congressional Research Service, Israel was the seventh largest arms exporter during the period 2000-2007 with sales worth an aggregate $10.8 billion. "Defense News" reports that Israel's defense companies signed contracts worth $5.6 billion in 2007 - an all-time high for the country's defense exports. According to the Ministry of Defense SIBAT - Foreign Defense Assistance and Defense Export Organization, and the ministry's Armaments R&D Administration, last year's sales were $700 million greater than the $4.87 billion in 2006, the previous record.

The US topped the rankings with an aggregate $123 billion in sales, followed by Russia with $62.2 billion, France - $29.2 billion, the UK - $25.2 billion, Germany - $12.6 billion, and China - $10.8 billion. In eighth place behind Israel, came Italy with $6.5 billion, followed by Spain with $6.5 billion, and Ukraine with $5.5 billion.

However, Ministry of Defense figures estimate Israel's total exports in 2000-2007 nearer to $29.7 billion, a figure which places Israel in fourth place behind Russia, France and the US."

Only 1/7 of Israeli defense sales are made in Israel, meaning that the country continues to gain market share around the world. In an Obama administration where everyone believes defense budgets are going to get cut, Israel may very well benefit as the country focuses on producing very smart technologies and technologies that are aimed at fighting terror, two sectors that should still have a strong demand.

Most impressive was the recent report that quoted Tussian Deputy Defense Minister Vladimir Popovkin as saying that the military has signed

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a contract to buy an unspecified number of pilot less drones from an Israeli company he did not identify.

India has also become a major client for Israel's defense industry. Besides conventional weapons India is buying AWACS and most recently satellites. tThe plane would be among three others acquired by India through a $1.1 billion deal signed in 2004.

Israel and India had been discussing military cooperation for several years now with Israeli promising to provide four more planes.

Key players in the defense export field are Israel Defense Industries and Elbit. The latter has a backlog of orders as of December 31, 2008 that totaled $5.0 billion, as compared with $4,872 million as of September 30, 2008 and $4,624 million as of December 31, 2007. Approximately 72% of the backlog relates to orders outside of Israel. Approximately
75% of the Company's backlog as of December 31, 2008 is scheduled to be performed during 2009 and 2010.

Russia to buy Israel surveillance drones

Russia is buying pilot less spy aircraft from Israel in hopes of improving its own unmanned drones after a poor performance in the war against Georgia last August, Russian news agencies quoted a top military official as saying.

Deputy Defense Minister Vladimir Popovkin said the military has signed a contract to buy an unspecified number of pilot less drones from an Israeli company he did not identify, state-run RIA-Novosti and ITAR-Tass reported.

"I was in Israel and even operated one," RIA-Novosti quoted him. as saying.

Russia has never before announced a purchase of military hardware from Israel. Their relations have vastly improved since the Cold War, when Moscow supplied weapons worth billions of dollars to Israel's Arab foes, but Russia continues to anger Israel by selling arms to other Mideast nations.

According to the reports, Popovkin said Russia has no plans to use the Israeli drones in combat. It wants to study the technology in an effort to improve its own seriously flawed fledgling drones.
Popovkin said Russia had used a drone called the Tipchak toward the end of the conflict over Georgia's separatist South Ossetia region, but it had very many problems, RIA-Novosti reported.

"You could hear it flying from 100 kilometers away," RIA-Novosti quoted Popovkin as saying. And because of flaws in the system that is supposed to identify it to Russian forces as friendly, it was hit by both Georgian and Russian fire, he said.

"It returned all shot up," Popovkin was quoted as saying.

Popovkin, who is in charge of procurement, said Russia, will use its own weapons in combat. According to ITAR-Tass, he joked that as for the Israeli pilot less aircraft, we will work on them like the Chinese do - a suggestion that China uses military technology it acquires from other nations to improve its own capabilities.

Georgia used Israeli-made drones before and during the five-day war, in which Russian and South Ossetian forces routed Georgian troops

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who had launched an offensive in the breakaway region.

Defense Ministry officials could not immediately be reached for comment
Friday, but the chief of staff of Russia's armed forces said in December that Russia was negotiating with Israel to buy a batch of spy drones.

Despite warmer ties, there is tension between Russia and Israel over Russia's cooperation with Iran and Syria. Israel is concerned that Russia could sell its them advanced anti-aircraft missile systems that would make any potential strike at Iran's first nuclear power plant - which Russia building - more difficult.

'Iron Dome' expected to be operational by summer 2010

The first complete short-range missile interception "Iron Dome" system is expected to become operational as early as summer 2010, the armaments development authority Rafael said.

A test of the system held last month proved successful, and another experiment, testing a fully-fledged rocket interception, is planned for summer of 2009.

According to schedule, Rafael will provide the first complete system to the Israeli Air Force at the end of the year. In the meantime, the organizationa nd training of a new platoon to service the system will be speeded up.

The first system is expected to provide protection for the Sderot area, and probably Ashkelon as well. The production of additional systems will continue. The Alta factory producing the radar system for Iron Dome is now upgrading its capabilities to enable it to recognize launched rockets at a longer range than previously planned.

Rafael intends to begin full production of the new system as soon as the first one deployed proves effective in the field. The Defense Ministry has yet to decide on the overall number of systems it wants produced.

Rafael expects that the cost of a single interception missile will drop to below $50,000 per unit as soon as the first 1,000 units are delivered. The company says the calculations of the project's opponents, who note a manifold difference between the costs of a single interceptor missile and a single Qassam rocket, are exaggerated. Rafael says the radar system is supposed to identify which rockets are likelier to fall in populated areas. No intercepting missiles will be deployed if the system determines the incoming rocket is heading toward open areas.

An analysis of Katyusha rockets fired by Hezbollah during the Second Lebanon War of 2006 showed that only 1,000 rockets (25 percent of all rockets launched) landed in populated areas. Rafael says that if Iron Dome had been operational at the time of the war, the majority of those missiles could have been shot down at a cost of tens of millions of shekels, a negligible amount when compared to the loss of life, destruction of property and strategic damage actually caused by Hezbollah.

Sources within Rafael said that producing and developing such systems in such a comparatively short period would be a significant achievement.

In 2007, the government approved funding for the system, which is designed to intercept short- and medium-range rockets such as Qassams and Katyushas.

The move came after years of cross-border rocket attacks on Israel from Gaza and the experience of the Second Lebanon War, during which Hezbollah guerillas fired almost 4,000 rockets into northern Israel.

Arrow interceptor test successful

Israel successfully tested its Arrow ballistic missile interception system April 7, a costly project launched two decades ago aimed at countering strikes mainly from Iran.

The Arrow (Hetz in Hebrew) intercepted and destroyed a ballistic missile comparable to Iran's Shahab-3, which can reach the Jewish state, that was fired by an Israeli fighter plane over the Mediterranean, a defense official said.

"This morning, the Arrow system performed a successful test," the defense ministry declared.

"The success of the project marks a key step in its development plan and the improvement of the operational systems to offer a response to the growing threat of ballistic missiles in the region."

Defense Minister Ehud Barak, who watched the test from a helicopter, said that together with a number of other rocket and missile interception systems being developed, the Arrow project "will offer optimal protection from near and immediate strategic threats," the ministry statement said.

It was the latest successful test of the Arrow, a project launched in 1988 during the now-defunct Star Wars program under then-U.S. President Reagan.

Work on theArrow was stepped up after 39 Iraqi Scud missiles hit Israel during the Gulf War.

Development of the Arrow is now half-funded by the United States. Israel has carried out more than a dozen successful tests of the Arrow under various conditions.

Israel considers Iran to be its arch-foe following repeated statements by Iranian President Mahout Ahmadinejad for the Jewish State to be wiped off the map.

Israel, widely considered to be the Middle East's sole nuclear armed state, and Washington suspect Iran of trying to develop atomic weapons under the guise of its civilian nuclear program, a charge Tehran has repeatedly denied.

IMI developing electric hummer

Israel Military Industries Ltd. (IMI) is developing an electric version of the Hummer all-terrain vehicle. IMI's Slavin plant, which also develops and upgrades armored vehicles and tanks.

The Israeli electric Hummer uses a powerful battery-operated electric motor combined with a diesel engine, which functions as a generator and recharge for the batteries when necessary. The combination extends the effective operating range of the Hummer from a few dozen kilometers on electric power to more than 450 kilometers, with a single tank of diesel fuel.

The electric Hummer is especially effective for military missions that require silence. The vehicle is also low-maintenance, has high survivability, clean emissions, and high performance. It is supposed to reach speeds of over 120 km/h and has rapid acceleration. Use of a generator for self-recharging is aimed at providing independent mobility without the need for a special recharging infrastructure.

IMI believes that the electric Hummer project has the potential for upgrading 200,000 military Hummers that are nearing the end of their operational lives worldwide. It was recently reported that the IDF was considering the procurement of electric and hybrid vehicles of various kinds. The US Army is also running a long-term tender for the development and delivery of various electric and hybrid vehicles designed for the battlefield of the future

Revolutionizing skin cancer diagnosis

An Israeli company has developed what it believes is a breakthrough device to aid in the early detection of skin cancer.

The device, developed by Skin Cancer Scanning, is currently undergoing clinical trials at Beilinson Hospital in Petah Tikva. It offers far more precise data than the doctor's naked eye, by using fiber-optic cables to scan for potentially malignant moles.

It was found to be 92 percent effective in identifying certain types of skin cancer - far more so than any apparatus currently available.

Skin cancer is one of the most common forms of cancer, and its incidence rate grows annually.

The disease is currently identified through a two-stage diagnosis - first, a physician examines suspicious moles. If the physician believes the patient is at risk, the patient undergoes a biopsy.

However, the doctor's examination is not precise, and many patients are sent for biopsies unnecessarily.

Yossi Biderman, a director of Skin Cancer Scanning, said, "Hundreds of millions of dollars are invested in trying to create a precise diagnosis method, but until now not a single tool has been

developed that can do so reliably. None of the existing devices can replace the actual doctor."

The new technology works based on the principle that cancerous cells proliferate faster than healthy cells, and their accelerated metabolic activity releases energy at a higher frequency. The device scans for this activity. Biderman said he expects to reach a precision level of 95 percent.

Israeli technology to increase mango yield

India will soon adopt an Israeli technology to rejuvenate mango trees that will increase the productivity of the crop.

The National Horticultural Board has placed orders for two Israeli machines Canopy Management Pruning Machine that can mechanically rejuvenate trees in large areas, NHB Managing Director, Mr. Vijay Kumar said.

"Even as the area under mango production is increasing every year, the productivity has not gone up as there is an urgent need for rejuvenation of the trees, but farmers are averse to cut or prune their plants, which is affecting productivity," he said.

The machines are a set of five equipments, which can pluck fruits that reduce post harvest losses and can also be used for spraying, Mr. Kumar said.
"We can also use the machines for plucking and spraying on coconut and areca nut trees," Mr. Kumar said.

"The first machine will arrive within a month and we will give it to the Indian Institute of Horticultural Research (Bangalore). The other will arrive in June and it would be given to the Central Institute for Subtropical Horticulture (Luck now) for better acclimation, he said.

Economic crisis cost $3.9b in exports

Manufacturers Association Economics Division director Ruby Ginel reporte that the Israeli economy suffered $3.9 billion in lost exports between October 2008 and February 2009, due to a 10% drop in orders.
said, "It should be remembered that exports are one the economy's primary locomotives for job creation. Each $1 billion loss in exports costs 10,000 jobs."

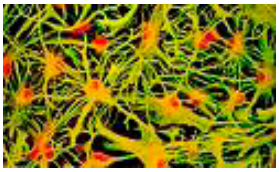
The Manufacturers Association says that industrial exports fell 5% in real terms in January-February, compared with the monthly average in the fourth quarter of 2008. Industrial exports totaled $4.9 billion in the first two months of the year.

Mixed high-tech exports fell 25% in real terms in January-February, after rising just 0.4% in the fourth quarter of last year. Most of the drop was due to a 17% fall in chemicals and refined oil products.

High-tech exports bucked the trend, with a 15% increase in exports in January-February, after falling 6% in the fourth quarter. Avionics exports rose by 50%, pharmaceuticals exports rose 13%, electronics components exports rose 4%, and exports of communications, control and supervision equipment rose by 5%.

How brain cells work together to react

An interdisciplinary team of scientists at the Hebrew University of Jerusalem has developed a new analytical tool to answer the question of how our brain cells record outside stimuli and react to them.



Although much progress has been made in understanding the brain in recent decades, scientists still know relatively little about how these processes function. The two key problems in making progress in this field are that there will never be enough real data in terms of measuring what the brain actually does, and even if there were, there haven't been enough methods for analyzing such data and using them to answer the question of how neural coding actually takes place.

The analytical method developed by the Hebrew University researchers should be able to provide an indication, for example, of how many neurons encode a given stimulus such as reactions to a face or a movement and how they collaborate to do it.

Current technology allows researchers only a very partial view of brain activity. For example, one cannot record the activity of more than a few hundred nerve cells from the cortex of a behaving animal. Methods like MRI imaging can map larger brain areas, but cannot be used to measure single neurons. A key question then remains of what one can learn from such a partial view.

The Hebrew University researchers, headed by Dr. Amir Globerson of the Rachel and Selim Benin School of Computer Science and Engineering, have formulated the novel principle of Minimum Mutual Information (MinMI) to tackle the issue. An article detailing their findings has been published online in the Proceedings of the National Academy of Sciences (PNAS) in the US.

In the article, the researchers provide analyses of both real and simulated data. Their method permits quantification of information in the brain about behavior, given sets of very partial measurements. The key insight to obtaining such results is to consider, via computer simulations, a set of "hypothetical brains" that could have generated the combination of the observed measurements, and then drawing conclusions that are valid for all the brains in this set.

Although this seems like a daunting computational task, the researchers have shown that it can be achieved in some cases.

The real data was recorded from monkeys in the laboratory of Prof. Eilon Vaadia, who is the Jack H. Skirball Professor of Brain Research at the Hebrew University- Hadassah Medical School and the Interdisciplinary Center for Neural Computation at the Hebrew University.

As experimental tools develop, the researchers are looking forward to obtaining access to actual brain measurements on a larger scale. Methods such as the ones they have developed will be applied to help analyze such data and gain even more far-reaching conclusions as to how brain cells process information.

Yissum and Germany's Merck set up nano-tech start-up

Yissum Technology Transfer Company of the Hebrew University of Jerusalem and German pharmaceutical company Merck KGaA (EXTRA: MRK) announced that they have signed an R&D agreement for the joint development of a novel semiconductor nanoparticle technology for a novel display application by Yissum spin-off, QLight Nanotech Ltd. The announcement was made at the 2009 NanoIsrael Conference.

Professor Uri Banin from the Institute of Chemistry and the Center invented the technology for Nanoscience and Nanotechnology at the Hebrew University of Jerusalem.

Yissum, Merck, and the Office of the Chief Scientist have invested several hundred thousand euro to set up QLight that will develop nanotechnology for color display screens for use in computers, televisions, and other devices.

Merck will license QLight's semiconductor nanoparticle technology for optical applications and will sponsor an R&D program. QLight will carry out over the next three years. QLight will contribute its experience in nanoparticle research, particularly in synthesizing and manipulating new nanoparticles. Merck will contribute its expertise in the specialty materials field and in large-scale production of sophisticated chemical formulations, which will be used for producing large quantities of the nanoparticles developed at QLight.

Flat-screen displays are mainly manufactured based on liquid crystal technology (LCD). QLight's technology will enable the development of both flexible and very large displays, including advertising displays, large-scale video and TV walls. The semiconductor nanoparticles technology enables large-scale production and will allow high brightness and low energyconsumption.

Merck KGaA has expanded its activity in Israel in recent years, including through its acquisition of Serono, which owned Ness Ziona-based Interpharm Laboratories, as well as through cooperation agreements with the Chief Scientist, which have already resulted in two agreements with Compugen Ltd. (Nasdaq: CGEN; TASE: CGEN).

Teva gets FDA approval on version of J&J's Topamax

Teva Pharmaceutical Industries Ltd. said Friday it received Food and Drug Administration approval

for a generic version of Johnson & Johnson's epilepsy drug Topamax.

The drug's key patents expired in March. Sales reached about $2.4 billion in 2008.

Teva says it has started shipping generic versions of the drug.

FDA approval for product to prevent cardiac adhesions

A material developed at the Hebrew University of Jerusalem that is designed to prevent adhesions (scar tissue) following surgery has led to approval by the U.S. Food and Drug Administration (FDA) of a product for use in pediatric cardiac surgery patients.

The product is the result of Prof. Daniel Cohn's invention of novel, tailor-made, biodegradable polymers for the prevention of post-surgical adhesions. SyntheMed Inc. of Iselin, N.J. in the U.S., received the technology from Yissum the Technology Transfer Company of the Hebrew University, and has now obtained FDA pre-market approval for the first product, REPEL-CV® Adhesion Barrier, for use in pediatric patients (21 and younger) who are likely to need secondary open heart surgery.

The generation of adhesions following heart surgery is of special concern, since they may affect cardiac function. Furthermore, in the frequent cases where repeat operations are required, adhesions obscure cardiac landmarks, making the procedure potentially life-threatening to the patient due to inadvertent vascular or cardiac injury.

In the U.S., there are 350,000 to 400,000 children with congenital cardiac abnormalities. Many neonatal and infant patients must undergo multiple surgeries before their defect is corrected, while other children require additional operations as they grow. The REPEL-CV® Adhesion Barrier product gives physicians another tool to help decrease the complications that may occur during these surgeries. .

"I am very excited that the long process that started several years ago in our laboratory at the Institute of Chemistry of the Hebrew University with the design and synthesis of a family of biodegradable polymers was recently approved by the FDA," said Prof. Cohn.

"This biomedical product harnessed the unique properties of a family of custom-made, biodegradable polymers aimed at treating a large, incredibly widespread clinical problem, which pertains to all surgeries: post-operative adhesions. Each and every surgery conducted inevitably results in post-surgical adhesions, and the polymeric film developed at the Hebrew University allows us to minimize those adhesions."

The approval by the FDA came after its approval in Europe and Canada. Receiving the approval of the different regulatory agencies was the result of the work of a large team. It started with the research conducted by Prof. Cohn and his students, who largely contributed to this endeavor, and continued with the work done at SyntheMed Inc., that developed the product and brought it to the clinic.

"I would like to thank each and all of them and acknowledge their pivotal contribution to the success of this project, all along the journey," said Prof. Cohn.

After the collapse

Weizmann Institute scientists observe the largest exploding star yet seen.

In the first observation if its kind, scientists at the Weizmann Institute of Science and San Diego State University were able to watch what happens when a star the size of 50 suns explodes. As they continued to track the spectacular event, they found that most of the star's mass collapsed in on itself, resulting in a large black hole.

While exploding stars – supernovae – have been viewed with everything from the naked eye to high-tech research satellites, no one had directly observed what happens when a really huge star blows up. Dr. Avishay Gal-Yam of the Weitzman Institute's Faculty of Physics and Prof. Douglas Leonard of San Diego State University recently located and calculated the mass of a gigantic star on the verge of exploding, following through with observations of the blast and its aftermath. Their findings have lent support to the reigning theory that stars ranging from tens to hundreds of times the mass of our sun all end up as black holes.

A star's end is predetermined from birth by its size and by the "power plant" that keeps it shining during its lifetime. Stars, among them our sun, are fueled by hydrogen nuclei fusing together into helium in the intense heat and pressure of their inner cores. A helium nucleus is a bit lighter than the sum of the masses of the four hydrogen nuclei that went into making it and, from Einstein's theory of relativity (E=MC2), we know that the missing mass is released as energy.

When stars like our sun finish off their hydrogen fuel, they burn out relatively quietly in a puff of expansion. But a star that's eight or more times larger than the sun makes a much more dramatic exit. Nuclear fusion continues after the hydrogen is exhausted, producing heavier elements in the star's different layers. When this process progresses to the point that the core of the star has turned to iron, another phenomenon takes over: In the enormous heat and pressure in the star's center, the iron nuclei break apart into their component protons and neutrons. At some point, this causes the core and the layer above it to collapse inward, firing the rest of the star's material rapidly out into space in a supernova flash.

A supernova releases more energy in a few days than our sun will release over its entire lifetime, and the explosion is so bright that one occurring hundreds of light years away can be seen from Earth even in the daytime. While a supernova's outer layers are lighting up the universe with dazzling fireworks, the star's core collapses further and further inward. The gravity created in this collapse becomes so strong that the protons and electrons are squeezed together to form neutrons, and the star's core is reduced from a sphere 10,000 kilometers around to one with a circumference of a mere 10 kilometers. Just a crate-full of this star's material weighs as much as our entire Earth. But when the exploding star is 20 times the mass of our sun or more, say the scientists, its gravitational pull becomes so powerful that even light waves are held in place. Such a star – a black hole – is invisible for all intents and purposes.

Until now, none of the supernovae stars that scientists had managed to measure had exceeded a mass of 20 suns. Gal-Yam and Leonard were looking at a specific region in space using the Keck Telescope on Mauna Kea in Hawaii and the Hubble Space Telescope. Identifying the about-to-explode star, they calculated its mass to be equal to 50-100 suns. Continued observation revealed that only a small part of the star's mass was flung off in the explosion. Most of the material, says Gal-Yam, was drawn into the collapsing core as its gravitational pull mounted. Indeed, in subsequent telescope images of that section of the sky, the star seems to have disappeared. In other words, the star has now become a black hole – so dense that light can't escape.

Rafael posts record profit as orders double

Rafael Advanced Defense Systems Ltd. published its full-year results for 2008. The company achieved a record net profit of $46 million, up 39% on 2007, on revenue of $1.53 billion. Orders received during the year reached $2.5 billion, up 98% on a year earlier.

Rafael CFO David Vaish said that the global economic crisis had no effect on the company's results last year because it takes time for governments to adjust their defense procurements for equipment and services to a given economic situation. He predicts that the economic crisis, which erupted in 2008, will have no effect on the company before 2010.

Vaish said, "Our concerns about adjustments in defense budgets will be reflected in fewer procurements in 2010." In other words, he predicts that Rafael will report good results in 2009.

As for the first quarter of 2009, Vaish added, "As far as the current quarter is concerned, we do not even see a drop in orders. The pace is the same as in 2008."

Rafael has 6,000 employees as well as subcontractors. The company develops munitions, armaments, and weapons platforms for the IDF and international customers.

"We're entering the era of crisis with a strong business position that gives us a security cushion. This is the case not only for our orders backlog, but also for our excellent cash flow, and our very good products portfolio. We believe that even in times like these, we'll be able to find customers," Vaish:

"Nonetheless, in recognition that there is risk, we're undertaking cost-saving measures, especially in procurements, because we usually make large-scale procurements. We're benefiting from lower prices for raw materials, but that's a very limited part of our procurements activity. We'll concentrate our cost-saving on procurements from subcontractors of components and sub-components."

"We're not laying off staff or cutting salaries. We even intend to increase our workforce in 2009 in order to meet our large orders backlog. Rafael is an island of stability from that standpoint."

Value of Israeli high-tech M&A fell 19 percent in 2008

The value of Israeli high-tech company mergers and acquisitions fell by nearly one-fifth in 2008 to $2.64 billion, the Israel Venture Capital (IVC) Research Center said on Wednesday.

There were 84 deals in total, a similar number compared to those in 2007 and 2006 but the value decreased by 19 percent from 2007 and 74 percent from 2006.

"Lower valuations present an opportunity to global technology leaders seeking innovative technologies at bargain prices," said Koby Simana, IVC chief executive. "We forecast an active M&A market in Israel in 2009 as a result."

The average acquisition size was $31 million in 2008, down 18 percent from 2007.

Deals involving companies backed by Israeli venture capital totaled $1.5 billion, down 22 percent from 2007.

For the first time since 2003 no initial public offerings were made by Israeli high-tech companies last year, reflecting the problematic global markets, IVC said.

The two most significant M&A deals last year were in the life sciences sector which is considered part of the high-tech sector in Israel.

Johnson & Johnson's (JNJ.N: Quote, Profile, Research, Stock Buzz) Ethicon division acquired Omrix, a provider of bio-surgery and passive immunotherapy products, for $438 million in cash.

U.S. medical device and services company St. Jude Medical (STJ.N: Quote, Profile, Research, Stock Buzz) acquired MediGuide, a firm focused on inter-body navigation and minimally invasive cardiology, for $300 million.

Acquisitions of foreign companies by Israeli firms reached $9.42 billion, with approximately 40 deals done in 2008. Teva Pharmaceutical Industries (TEVA.O: Quote, Profile, Research, Stock Buzz) (TEVA.TA: Quote, Profile, Research, Stock Buzz) accounted for more than 87 percent of the total with its purchases of two U.S.-based firms - Barr Pharmaceuticals and CoGenesys - and Bentley Pharmaceuticals of Spain.

13 Israeli companies on Forbes' list

Teva Pharmaceuticals Industries Ltd. topped the list of the thirteen Israeli companies who made it into this year's Forbes ranking of the world's 2000 biggest companies, compared with ten companies last year.

"Many of the names of this year's Forbes Global 2000 list of the world's biggest companies will emerge on the other side of the trough far stronger when the world economies snap back next year," said Scott DeCarlo, Project Editor of the Forbes Global 2000 list. "For the strong corporations there are rivals to buy, technologies to fund and new markets to enter - all at lower prices than we have seen in years."

Four new Israeli companies joined and one Israeli company dropped out of the list of the 2000 biggest companies ranked by US magazine Forbes. New entrants to the list are Bezeq Telecommunications Ltd., Africa Israel Investments Ltd., Check Point Software Technologies Ltd., and Gazit Globe Ltd., while Oil Refineries was dropped out of the list.

Topping the 13 Israeli companies on the list was Teva Pharmaceuticals Industries Ltd., ranked in place 381 of the 2000 largest companies around the world - down from 346th place last year, followed by Bank Leumi at number 808 and Bank Hapoalim at number 859.

Delek Group was ranked in 1112th place closely followed by IDB Holding Ltd. in 1119th place and Israel Corp. in 1238th place. Israel Discount Bank was ranked in 1289th place, Africa Israel Investments was in 1344th place, Bezeq Telecommunications Ltd. was in 1554th place, Check Point Software Ltd. was in 1561st place, Bank Mizrahi Tefahot was in 1600th place, FIBI Holding Ltd. was in 1832nd place and Gazit Globe Ltd. made it to the 1882nd place.

Forbes' ranking of the world's biggest companies is not based on a single metric, like sales. Instead, an equal weighting of sales, profits, assets and market value is used to rank companies according to size. The rankings span 62 countries, with the US still dominant at 551 members, but that is 200 fewer than in 2004, when the magazine first published this global list.

The top ten of the largest companies in the ranking was led by General Electric, Royal Dutch Shell in second place, and Toyota Motors in third place.

As world economies are hit by a global recession, combined profits of the 2000 largest companies were down 31 percent last year while market value was down 49%. In total, the Forbes Global 2000 companies account for $32 trillion in revenues, $1.6 trillion in profits, $125 trillion in assets, and $20 trillion in market value.

Israel Agritech 2009

The 17th International Agricultural Exhibition, Agritech 2009, showcasing the latest innovations and developments in Israeli Agriculture iwill be held at the Israeli Trade Fairs and Convention Center in Tel Aviv May 5th-7th, 2009.

The exhibition, one of the most important agro-technological exhibitions in the world, has already generated great interest in both ocal and foreign media.

Israeli and foreign companies will be presenting agricultural technologies in a large variety of areas, including: Agri Ecology, Aquaculture, Agricultural Machinery, Fertilizers & Chemicals, Biotechnology, Fork Lift & Handling, Floriculture Equipment, Greenhouses, Livestock & Dairy, Marketing & Export Services, Energy Crops, Farming, Fighting Desertification, Plant Propagation Material, Irrigation & Water management, Plasticulture,

Organic Agriculture, Poultry, Plant Protection R&D, Post Harvest Treatment, Small Ruminants, Precise Agriculture, Turnkey Projects & Knowledge Transfer, Rural Development Software & Hardware, Veterinary Issues and many more.

Visitors from 50 countries have registered, expressing their enthusiasm at visiting the Exhibition. Delegations from around the world will be arriving to explore business cooperation possibilities.

"Diet Beef" Cows

At Agritech 2009 Israel, International Agriculture Exhibition, orders can be placed for "Diet Bull" Sperm whose meat contains much less fat

A new breed of blue bull imported from Belgium is about to revolutionize the Israeli kitchen. This new type of meat contains only 7% fat compared to 30-35% fat in regular beef.
These special bulls' sperm can be ordered from Sion, an Israeli company specializing in improving the Israeli herd. Each portion will be sold for €10. The new breed is being raised at Kibbutz Neve Or. At present there is one single herd in Israel, including 80 female cows and calves.
This year, 7,000 portions of sperm are expected to be used for insemination.

One kilo of the blue bull's meat is sold for NIS 18, compared with NIS 15 for hybrid veal meat.

Israel is a central intersection of cattle sperm import and export thanks to the local investment in genetic cultivation of cattle farms. In recent years Israel has exported large amounts of cattle sperm to Vietnam, Uzbekistan, Tajykistan, Burkina Faso, the Ivory Coast, Nigeria, Kenya and Rowanda. "This is a classic example of the entrepreneurial flexibility so typical of Israeli entrepreneurs" says Avi Hefetz, CEO,
of The Israel Export & International Cooperation Institute. "They know how to combine the relative advantages of technologies and different breeds and species in order to identify an effective and productive synthesis addressing the changing needs of various countries. This way, each receives a tailor made response -- ultimately the total integrated best solution," says Hefetz.

Ben-Gurion University signs collaborative contract with Bayer CropScience

Extreme temperatures and limited water availability are major stresses for plants and cause dramatic losses to agriculture around the world. Ben-Gurion University of the Negev has announced the establishment of a research collaboration with Bayer BioScience N.V., a subsidiary of Bayer CropScience based in Ghent, Belgium, to develop solutions to these challenges. The agreement builds upon the expertise and breakthrough results from Dr. Simon Barak's laboratory at the University's Jacob Blaustein Institutes for Desert Research (BIDR).

Barak's team is using a combination of approaches to identify genes that allow plants to tolerate the harsh environmental stresses characteristic of arid regions. Two of these genes have been studied in detail and the team found that by removing either of the two genes, the tolerance of the model plant, Arabidopsis, to heat, salt and drought could be increased. This study was published recently in Plant Physiology, an internationally renowned journal.

Signed between BGN Technologies – the technology transfer company of Ben-Gurion University of the Negev– and Bayer CropScience, the agreement will allow the identification of additional genes that have an effect on making plants more "stress-resistant". Barak, a member of the French Associates Institute for Agriculture and Biotechnology of Drylands at the BIDR, noted that the new collaboration will allow his team to further sift through the estimated 30,000 Arabidopsis genes to identify additional candidate stress tolerance genes.

Ben-Gurion University of the Negev was created to spearhead the development of the Negev desert, a region comprising more than 60% of Israel. The Jacob Blaustein Institutes for Desert Research is situated in Sede Boker and is a world leader in arid zone research.

BGN Technologies is the Technology Transfer Company of Ben-Gurion University, responsible for the commercialization of know-how and inventions of the University's researchers. Through the development of novel University technologies and creative partnering with industry and investors, BGN brings value to the technological marketplace.

BioScience, one of the three business groups of Bayer CropScience AG, plays a prominent international role in the development and commercialization of seeds and traits for agricultural crops. The company uses plant biotechnology and refinement techniques to develop varieties that are adapted to the requirements of tomorrow's agriculture. BioScience has more that 2100 employees worldwide and is headquartered in Lyon, France.

Muscle deterioration in patients with lung disease seen connected to heightened carbon dioxide levels in the blood

Muscle deterioration in patients with lung diseases might be a direct consequence of high carbon dioxide levels in their blood, an international team of researchers headed by Prof. Yosef Gruenbaum of the Hebrew University of Jerusalem has found.

The incidence of lung diseases continues to increase in the world's populations. For example, one in seven persons in the UK is affected by some form of chronic lung disease, most commonly chronic obstructive pulmonary disease (COPD) and asthma.

Many of these diseases also cause, in the worst cases, muscle deterioration as well as elevated levels of carbon dioxide (hypercapnia) in the bloodstream. In a normal situation, the lungs allow for a proper balance of oxygen from the atmosphere reaching the bloodstream and carbon dioxide from the bloodstream being transferred to the atmosphere.

It is still a matter of some controversy whether the high carbon dioxide levels in patients with chronic lung disease actually cause damage to those patients and specifically whether the loss of muscle is a consequence of those heightened levels.
They used the worm C. elegans, in which many basic processes are discovered, to study its response to induced elevated carbon dioxide levels. They found that levels exceeding 9% (normal level in living beings is around 5%) reduced the worm's spontaneous movement capability, which was accompanied by deterioration of body muscle.

(These results suggest re-evaluating the

consequences of the procedure of permissive hypercapnia, also known as therapeutic hypercapnia, in which patients with acute lung injury are treated with increased levels of carbon dioxide.)

In addition, there were signs that the experimental animals showed slower development, were less fertile, but, surprisingly, had an increased lifespan. Another unexpected result was the large number of genes that showed specific and dynamic changes after only one hour of exposure to the heightened carbon dioxide levels.

The researchers noted also that physiological and molecular response to hypercapnia appeared to be different from responses to heat shock or to low oxygen levels.

Hadasit licenses medical technology to Immuron

Hadasit - the Technology Transfer Company of Hadassah Medical Organization has licensed a novel oral immune modulation technology developed by Hadassah physicians and scientists to Australian biopharmaceutical company Immuron Ltd. (ASX: IMC; Bulletin Board: IMROY).

Hadasit will combine its oral immune modulation with Immuron's oral protein and antibody technology to develop an all-natural, side-effect-free approach to address serious diseases with multibillion dollar markets, such as metabolic syndrome, hepatitis C and type II diabetes.

Hadassah Medical Center scientists have demonstrated that their oral immune modulation approach, used in combination with Immuron's own dairy-derived antibodies and other proteins, can directly affect the activity level of regulatory T cells, a type of immune cell known to have profound effects in controlling the inflammation caused by many diseases. This approach has shown positive effects in several animal models of human disease, including type II diabetes and metabolic syndrome.
Hadasit will also provide clinical and laboratory services to Immuron, which will reduce the cost of Immuron's human clinical trials. In return, Hadasit will receive 19.99% of Immuron's equity, as well as royalties on Immuron products. Prof. Yaron Ilan of Hadassah Medical Center will become Immuron's chief medical officer. He will continue to serve as the director of the Department of Medicine A at the Hadassah Ein Kerem University Hospital, and the deputy dean of the Hebrew University Hadassah School of Medicine.
Immuron will use the Hadasit technology to develop treatments for metabolic syndrome, chronic hepatitis C and liver cancer (hepatoma), for which there are no current adequate therapies. Since the products will be marketed as a medical food in the US and in other countries, Immuron believes that it can introduce commercial products for some treatments shortly after the successful conclusion of these trials, possibly within two-three years.