ISRAEL HIGH-TECH & INVESTMENT REPORT

A MONTHLY REPORT COVERING NEWS AND INVESTMENT OPPORTUNITIES JOSEPH MORGENSTERN, PUBLISHER-August 2014 Vol. XXIX Issue No.8 You are invited to visit us at our website: http://ishitech.co.il

Investing Overseas

A 72 hour humanitarian cease fire ended and Hamas began to shell Israel once again. In four hours, more than 30 rockets landed on Israeli territory. Israel has indicated its willingness to enter into a permanent cease fire but the offer was declined. However, an additional five day cease fire was agreed upon.

Israel's potition is that we will only accept proposals that meet itsssecurity needs.

Perhaps one of the particular develpments is that while the war and shelling goes on the Israeliu high-tech sectgor is flourishing

Israeli company building America's largest esalination plant in California

Moreover the acquisition of Israeli concern Last year Israel experienced its driest winter on record,

While previous droughts have been accompanied by impassioned public service advertisements to conserve, this time around it has been greeted with a shrug — thanks in large part to an aggressive desalination program that has transformed this perennially parched land into perhaps the most well-hydrated country in the region.

"We have all the water we need, even in the year which was the worst year ever regarding precipitation," said Avraham Tenne, head of the desalination division of Israel's Water Authority. "This is a huge revolution."

By solving its water woes, Israel has created the possibility of transforming the region in ways that were unthinkable just a few years ago. But reliance on this technology also carries some risks, including the danger of leaving a key element of the country's infrastructure vulnerable to attack.



Israeli company building America's largest desalination plant in California

Sensibo says it's already cool. Now make your AC energy smart!

Intel Invests \$10M In Israeli cyber security firm Fortscale

Israeli NGO designs world's first kid-friendly wheelchair

Israel develops blood Test to detect breast Cancer

llsrael Defense Forces to deploy more unmanned ground vehicles

SingTel unit Amobee acquires Kontera for \$150m

Switzerland Selects the Israeli Hermes 900 for its Future Drone

Situated in the heart of the Middle East, Israel is in one of the driest regions on earth, traditionally relying on a short, rainy season each winter to replenish its limited supplies. But rainfall only covers about half of Israel's water needs, and this past winter, that amount was far less.

According to the Israeli Meteorological Service, northern Israel, which usually gets the heaviest rainfalls, received just 50 to 60 percent of the annual average.

Tenne said the country has managed to close its water gap through a mixture of conservation efforts, advances that allow nearly 90 percent of wastewater to be recycled for agricultural use and, in recent years, the construction of desalination plants.

Since 2005, Israel has opened four desalination plants, with a fifth set to go online later this year. Roughly 35 percent of Israel's drinking-quality water now comes from desalination. That number is expected to exceed 40 percent by next year and hit 70 percent in 2050.

The Sorek desalination plant, located roughly 10 miles south of Tel Aviv, provides a glimpse of that future.

With a loud humming sound, the massive complex produces roughly 20 percent of Israel's municipal water, sucking in seawater from the nearby Mediterranean through a pair of 2.5-meter-wide pipes, filtering it through advanced "membranes" that remove the salt, and churning out clean drinking water. A salty discharge, or brine, gets pumped back into the sea, where it is quickly absorbed. The facility, stretching nearly six football fields in length, opened late last year.

Avshalom Felber, chief executive of IDE Technologies, the plant's operator, said Sorek is

the "largest and most advanced" of its kind in the world, producing 624,000 cubic meters of potable water each day. He said the production cost is among the world's lowest, meaning it could provide a typical family's water needs for about \$300 to \$500 a year.

"Basically this desalination, as a drought-proof solution, has proven itself for Israel," he said. "Israel has become ... water independent, let's say, since it launched this program of desalination plants."

By meeting its water needs, Israel can focus on longer-term agricultural, industrial and urban planning, he added.

Disputes over water have in the past sparked war, and finding a formula for dividing shared water resources has been one of the "core" issues in Israeli-Palestinian peace talks.

Jack Gilron, a desalination expert at Ben-Gurion University, said Israel should now use its

Israel High-Tech & Investment Report

Published monthly since January 1985

Publisher and Editor in Chief

Joseph Morgenstern, B.A. Chem.

Technology Review Board

Prof. S.J. Joel-Cohen, MD, FRCS. FRCOG (1996-2002) Prof. Hylton Miller, M.B. Ch.B.

Copy Chief
Debbie Mor
Web Master
Marty vonBokel

Graphics Consultant

Daniel Morgenstern

Subscription Inquiries

Tel-. +972-3-5235279 Fax. +972 3-5227799
E-mail: htir_1@netvision.net.il
Annual subscription \$95.- per year, for 11 issues,
Israeli residents add 17% VAT
Web Edition and Achives

expertise to solve regional water problems. "In the end, by everybody having enough water, we take away one unnecessary reason that there should be conflict," he said.

Israel has already taken some small steps in that direction. Last year, it signed an agreement to construct a shared desalination plant in Jordan and sell additional water to the Palestinians.

Israel's advances with desalination could help it provide additional water to the parched West Bank, either through transfers of treated water or by revising existing arrangements to give the Palestinians a larger share of shared natural sources.

"Desalination, combined with Israel's leadership in wastewater reuse, presents political opportunities that were not available even five years ago," said Gidon Bromberg, the Israel director of Friends of the Earth Middle East, an environmental advocacy group.

Under interim peace accords signed two decades ago, Israel controls 80 percent of shared resources, while Palestinians get just 20 percent. A more equitable deal could remove a key source of tension, opening the way for addressing other issues, he said.

But with the most recent round of peace talks having collapsed last month, there is little hope of making progress on any of the core issues anytime soon.

Moreover, Bromberg said desalination is not an end-all solution. The plants require immense amounts of energy, consuming roughly 10 percent of Israel's total electricity production, he said.

The exact impact of desalination plants on the wider Mediterranean also isn't clear, he added.

A number of countries, including Cyprus, Lebanon and Egypt, are either using or considering the use of desalination plants.

IDE's Felber said the impact of returning brine to the sea is "minor." But Bromberg insists it is too early to say what impact multiple plants would have, saying "much more research is required."

Relying so heavily on desalination also creates a potential security risk. Missile strikes or other threats could potentially knock out large portions of the country's water supply.

The threat is even more acute in Arab countries of the Gulf, which rely on desalination for more than 90 percent of their water supplies and are located much closer to rival Iran.

The Sorek plant is heavily protected with fences, security cameras and guards, and it is not connected to the Internet, instead using a private server, to prevent cyber attacks. But like other key infrastructure, it could be susceptible to missile strikes. During a 2006 war, for instance, Lebanese Hezbollah militants attempted to strike an Israeli power plant.

Tenne, of the Water Authority, acknowledged that "anything in Israel is vulnerable," but said the same could be said for sensitive infrastructure behind enemy lines. "I hope that people will be smart enough not to harm infrastructure," he said.

Intel Invests \$10M In Israeli cyber security firm Fortscale

The Israeli intelligence analytics company Fortscale, whose technology helps protect companies against cyber attacks using big data, raised \$10 million in funding from Intel Capital and Blumberg Capital, it was announced on Monday. The investment will be used by the cybersecurity company to open Fortscale's new

headquarters in Silicon Valley, California and to fund the growth of the Israeli-based R&D and analytics teams. Founded in 2012, Fortscale specializes in helping large companies and enterprises defend themselves against cyber Teva acquiring Labrys Biologics, startup that targets migraines, for \$825

Shares of TEVA on the Nasdaq exchange have risen 30% from the beginning of 2014.

Teva headquarters in Jerusalem. Photo by n for separation of generic, specialty medicine units Teva Pharmaceutical Industries is acquiring Labrys Biologics, a privately-held development stage biotechnology company focused on treatments for chronic migraine and episodic migraine, the two companies announced Tuesday.

Teva will acquire Labrys for \$200 million in upfront payment in cash at closing as well as up to \$625 million in contingent payments upon achievement of certain pre-launch milestones, according to the definitive agreement.

Labrys has been developing a drug to treat migraines known as LBR-101, which it describes as "a fully humanized monoclonal antibody that binds to calcitonin gene-related peptide." It is currently in Phase IIb clinical trials. It acquired LBR-101 from Pfizer in 2012. The companies estimate that peak sales for the drug could reach \$2 billion to \$3 billion.

"More than 8.5 million people in the U.S., EU and Japan suffer from episodic or chronic migraine requiring preventative treatment, a condition that can destroy their quality of life," said Michael Hayden, Teva's President of Global R&D and Chief Scientific Officer. "With its long half-life, target specificity and favorable pharmacokinetic profile allowing for infrequent, and convenient, subcutaneous administration, LBR-101 represents a very exciting biologic product candidate, and much needed option,

for the management of this truly debilitating condition."

The closing of this transaction is subject to antitrust clearance and satisfaction of other conditions, the companies cautioned.

Shares of TEVA on the Nasdaq exchange rose nearly 3% after announcing a new organizational structure, and have risen 30% from the beginning of 2014 to its highest levels since early 2011.

Israel develops blood Test to detect breast Cancer

About 4,500 women in Israel are diagnosed with breast cancer every year, according to the Israel Cancer Association, and roughly 900 die annually from the disease. The key, experts say, is early detection - which can raise the survival rate to 90%.

Official state policies therefore promote biannual mammograms for women between ages 50-74. But what if a simple blood test could detect cancer even earlier?

Israeli company EventusDx made a major breakthrough in breast cancer treatment this month, after completing an eight-year project to produce a cancer-detecting blood test.

Research team leader and molecular biologist Galit Yahalom, who spearheaded the project at the company's labs said "For the last decade, we have known that there is a connection between cancer and the immune system," Yahalom, a mother and Modi'in native who has been working on this project since its inception, stated.

"We know that it recognizes cancer as an external enemy that must be destroyed. It is possible that each of us has had instances of cancer we were unaware of, because our immune systems

killed it when it was still very small. For whatever reason, the immune system of people with cancer is not functioning properly."

Yahalom assembled a team of fifteen biologists and a computer expert to tackle the task of determining which proteins indicate breast cancer in a blood sample. To do so, the team examined the immune system activity of several groups of people, including healthy women, women with breast cancer, and both women and men with gender-specific cancers, e.g. ovarian cancer and prostate cancer.

After collecting data from hundreds of healthy women and as many diagnosed with breast cancer, Yahalom's team looked for the proteins of the immune system responsible for detecting both. They also examined immune-system activity in women with ovarian cancer and men and women with intestinal cancer, to see the distinction from those with breast cancer.

The categories, she said, were developed through a mathematical algorithm developed by EventusDx. The algorithm was meticulously perfected; it now has only a five percent margin of error. "Even this small amount might not actually constitute error," Yahalom noted, "but rather the possibility that someone's immune system detected a cancer that is either no longer there — because antibodies destroyed it — or that has not erupted yet."

The test, dubbed Octava Pink, is now available in Israel and Italy. Over 400 tests have been performed since it was released in September, and the Food and Drug Administration (FDA) is currently reviewing the procedure for use in the US.

Microsoft to open cybersecurity accelerator in Israel

The accelerator, a partnership with Jerusalem Venture Partners, will assist security startups in

turning their ideas into viable businesses.

Microsoft is to open a new cybersecurity accelerator in Israel in a bid to capitalize on the country's expertise in the field, according to a report in TechWorld.

The accelerator will be a joint venture between Microsoft Ventures, the start-up arm of the tech giant, and Jerusalem Venture Partners, Israel's leading cyber security investor.

The intention is to make an environment that will help Israeli cybersecurity startups create products and services that can address some of the world's most concerning cyber security threats.

Israel has already spawned several successful security companies, including Cyvera, Fortscale and Check Point.

During the first four-month program, set to run between September 2014 and December 2015, Microsoft will provide between six and eight start-ups with oversight and expertise from industry executives, as well as "free tools" and anything else they might need to help them deliver breakthroughs in cyber technology and services.

"Our accelerator program leverages the Microsoft worldwide footprint to give start-ups unparalleled routes to customers and partners," said Hanan Lavy, director of Microsoft Ventures Accelerator.

"We use this power to push start-ups to their success. We are eager to work closely with JVP to provide unique opportunities for entrepreneurs in our accelerator."

JVP Cyber Labs, is an early-stage investment vehicle aimed at identifying, nurturing and building the next wave of cybersecurity companies

to emerge from Israel. It has pledged to give \$1 million to one start-up at the end of the accelerator program, together with a place in its own incubator located in Be'er Sheva.

"We put special emphasis on working with strategic partners, such as Microsoft, to get market validation for the significant innovations we are witnessing in the cybersecurity space," said Yoav Tzruya, partner at JVP Cyber Labs.

"It is our top priority to create an ecosystem which nurtures entrepreneurs and start-ups independently of our portfolio."

The program will be run out of the existing Microsoft Accelerator facility in Tel Aviv.

Microsoft announced the accelerator programme in June 2013 and several of the 10 proposed accelerators are already up and running, including those in Bangalore, Beijing, Paris, Seattle and London. Some 119 companies have already enrolled on the Microsoft Ventures accelerator program and Microsoft claims that the vast majority of them went on to secure funding on the demo day or within six months.

Ilsrael Defense Forces to deploy more unmanned ground vehicles

Unmanned ground vehicles for patrolling border areas and for scoping out buildings and tunnel systems are to be deployed by the Israel Defense Force.

By Richard Tomkins I June 3, 2014 at 12:49 PM I 0 Comments (Leave a comment)

Israeli unmanned vehicles patrol a border area. (Israel Defense Force photo)

-Israel's military says it will soon more unmanned ground vehicles to protect its troops and borders from terrorist threats.

"Major threats are evolving on Israel's borders

every day," The Israel Defense Force said. "Hamas' underground network in Gaza trains daily to infiltrate Israel, as Hezbollah expands its arsenal of weapons on Israel's northern border. Meanwhile, terrorists in Judea and Samaria attempt to smuggle weapons through crossings and attack Israeli communities.

"The superiority of Israel's technology is its greatest deterrent against these threats. Among its finest tools are unmanned ground vehicles, which could redefine Israel's capabilities in the near future."

Among the technologies in the works for deployment are small, soldier-carried robots to scan tunnels and gather intelligence for troops. They will be able to map entire buildings and terrorist-used tunnels to give troops pre-entry knowledge as to the structure's layout.

"A robot doesn't deal with the same difficulties of lighting, gunfire or breathing (in tunnels)," said Maj. Lior Trablisi, the head of the IDF's robot and technology unit.

A next-generation variant of an unmanned ground vehicle called Loyal Partner will also come into play. Loyal Partner can maneuver like a Humvee or Armored patrol vehicle while carrying weapons and other equipment for deployed soldiers.

The IDF said the use of robotics along the country's southern border along Gaza is not new but from early next year a vehicle called the Border Protector will be added to the fleet. It will move along border areas with advanced camera systems to identify suspected terrorists and has the capability to be controlled from remote areas.

Each battalion of soldiers on border duty in the south will have one of the vehicles, the IDF said.

Bally Technologies acquires DragonPlay for

\$100m

The company's casino-style games are designed for Android, iPhone, and Facebook platforms.

Mobile social gaming company DragonPlay Ltd. has been acquired by Bally Technologies Inc. (NYSE: BYI). The acquisition is believed to be for \$100 million. Bally, which has been manufacturing gambling machines since 1936, has 3,500 employees at 25 branches worldwide, and has a market cap of \$2.2 billion.

Gaming app co Dragonplay raises \$14m

Dragonplay was founded in 2010 by Sharon Tal. It develops casino-style games. Its most widely sold app is Live Hold 'em Poker Pro. The company's games, such as Sea Battle, Live Blackjack, and Farm Slots, are designed for Android, iPhone, and Facebook platforms. According to IVC, it has 70 employees, and had \$30 million revenue in 2013, the same as in 2012.

Dragonplay raised \$14 million in its first financing round in 2012. Accel Partners led the round, with Entree Capital and Founder Collective participating.

150 gaming developers in Israel

According to the GamelS - Digital Games Industry Association in Israel, the country's gaming industry has an annual turnover of \$450 million, and that 150 companies are developing digital games. The top ten companies in the business have about 40 employees each, and smaller companies each have 5-10 employees. The companies usually develop 2-3 games a year. The industry has over 2,000 employees, including software developers and programmers, script writers, designed, animators, and production staff.

"Within a few years, the digital gaming industry has grown from a few dozen to several thousand workers and become one of the

most sought-after sectors in high tech,"GamelS chairman Nir Miretzky told "Globes". "The global gaming industry has for a long time been one of the world's largest industries, surpassing the movie industry, with a turnover of over \$400 billion a year. Facebook has declared that three Israeli companies are among the ten most profitable Facebook gaming companies. It has also targeted games from China, Russia, and Israel as some of its growth targets for 2014. These two statements indicate the great potential for continued growth by Israeli gaming developers."

Bally buys Israel's Dragonplay for \$100m Tel Aviv-based company is leader in online social casino gaming.

Switzerland Selects the Israeli Hermes 900 for its Future Drone

Switzerland has selected the Hermes 900 Medium Altitude Long Endurance (MALE) unmanned aerial vehicles (UAVs) as the successor for IAI/Ruag Ranger UAV (ADS95 system) that has been in service with the Swiss Air Force since 2001.

Share on email Share on printfriendly Share on pocket More Sharing Services23

In 2012 the Hermes 900 drone deployed to Emmen, participated in a 'flyoff' against the Heron I, as part of the Swiss Air Force evaluation of the two systems.

In 2012 the Hermes 900 drone deployed to Emmen, participated in a 'flyoff' against the Heron I, as part of the Swiss Air Force evaluation of the two systems. Photo: Avia News. Elbit Systems have sent the Hermes 900 UAV to Emmen, for evaluations. Following its selection for the Swiss program, the first Hermes 900s are expected in Switzerland by 2017. Photo: Avia News.

Elbit Systems have sent the Hermes 900 UAV

to Emmen, for evaluations. Following its selection for the Swiss program, the first Hermes 900s are expected in Switzerland by 2017. Photo: Avia News.

Switzerland has selected the Israeli Hermes 900 Medium Altitude Long Endurance (MALE) unmanned aerial vehicles (UAVs) made by Elbit Systems, as the successor for IAI/Ruag Ranger UAV (ADS 95 system) that has been in service with the Swiss Air Force since 2001. The selection was announced yesterday (June 5) by Armasuisse, Switzerland's defense procurement agency.

The Swiss evaluation focused on two Israeli drones – the Hermes 900 and IAI's Heron I. The final evaluations carried out in Switzerland in late 2012 included test flights by both systems. In the pre-evaluation, these two UAV systems were the best in meeting the requirements.

The Swiss evaluation preferred the hermes 900 over its competitor the Super Heron built by Israel Aerospace Industries. Armaswiss said the Hermes 900 HFE has been favoured because it delivered the better overall result in all assessed criteria.

The Super Heron was officially unveiled in February 2014, was positioned between the combat proven Heron I MALE drone and the much larger Heron TP. Switzerland has evaluated the heron I with the standard Rotax 914 engine, and was also offered the slightly larger 'Super Heron' variant that can be powered with a Heavy Fuel Engine (HFE).

Engine and payload choices

The Swiss selection opted for the hitherto unannounced Hermes 900HFE - a designation hinting on a model powered by HFE engine. Elbit Systems has used HFE engines in the past, in the Hermes 90, a version of the Hermes 450 powered by an HFE has also been displayed. Aviation certified HFEs are providing more robust propulsion for UAS, albeit heavier and more expensive. It also alleviate a major concern for operators having to support drones from forward operations bases or at sea, where the delivery and storage of highly flammable gasoline would be risky and more complex than handling of military standard JP8 diesel fuel, commonly used for automotive propulsion.

The Hermes 900 HFE system will enable the Swiss military to perform reconnaissance and intelligence gathering missions under all-weather conditions, day and night. Its operation is more flexible, it has longer endurance in the air and a wider operational range than the Ranger system currently in use.

On their evaluation flights in October 2012 the Swiss evaluation team tested the Hermes 900 with a full set of sensors, including the COMPASS EO/IR gimballed sensor, Synthetic Aperture Radar (SAR), the Large Area Scanning System Operation (LASSO) wide area EO scanner, Electronic Intelligence (ELINT) and Communications Intelligence (COMINT).

The drone's integral satellite communications system enables unobstructed control of the system beyond line of sight, particularly when deployed across mountainous areas. the Hermes 900 is designed with a 2.5 meters long bay that can accommodate internal payloads, additional sensors or fuel. This payload bay can carry up to 250 kg, allowing quick installation and replacement of payloads. Delivery schedule

The swiss drone will be used for reconnaissance missions and will be unarmed. Armaswiss confirmed that there are no plans or future options to arm UAVs in Switzerland. Valued about US\$ 280 million (CHF250 million) the

Israeli satellites to be eyes in the sky for

nternational disaster aid

Israel Space Agency joins forces with ImageSat, which operates the EROS A and B satellites •Data can now be immediately transferred to the relevant authorities via the U.N. Science Minister Yaakov Peri: This will improve Israel's image in the world.

Israel will start providing satellite data as well as images that will help rescuers operate at disaster scenes all over the world, increasing the nation's contribution to international search and rescue efforts.

The idea for Israel's satellites to serve as eyes in the sky at disaster sites came about as part of the ongoing cooperation between the Israel Space Agency and the U.N. Committee on the Peaceful Uses for Outer Space. Daniel Brook, an advisor to the ISA on international relations, learned about the U.N. Platform for Spacebased Information for Disaster Management and Emergency Response (SPIDER), which serves as a data transfer hub in the event of international catastrophes. Nations can voluntarily submit their own images and SPIDER will forward them to the relevant authorities.

Seeking to join the effort, the Israel Space Agency hired ImageSat, a company that operates Israel's EROS A and EROS B satellites from the Israel Aerospace Industries building and Elop, respectively. When necessary, ImageSat will aim the satellites at disaster-struck locations. Images captured will be immediately transferred via SPIDER.

ImageSat has already photographed many disaster scenes, including the tsunami in Thailand, but until now there has been no organized manner in which to get the data to the right people in an expeditious manner.

Science, Technology and Space Minister Yaakov Peri said, "The move helps improve Israel's image in the world."

SingTel unit Amobee acquires Kontera for \$150m

Kontera provides an advertisement platform for websites that hyperlinks words to external content.

SingTel's Israeli digital advertising unit Amobee Technologies Ltd. has acquired Israeli digital content intelligence and marketing solutions developer Kontera Ltd. for \$150 million and two units of cross channel digital advertising companyAdconian Media Group Ltd. Adconion Direct North America and Adconion Australia for \$235 million (or \$209 million net of debt). Singapore Telecommunications Ltd. (SingTel) (SGX: Z74, ASX: SGT; Pink Sheets: SGAPY) acquired Amobee for \$340 million in early 2012.

SingTel buys mobile ads co Amobee for \$321m

Amobee said that the acquisitions will strengthen its position as the leading provider of mobile-led digital marketing technology and solutions across all channels and screens for global brands. The combined capabilities will better position the company to capitalize on the fast growing global digital advertising market.

Kontera's investors include Sequoia Capital, Carmel Ventures, and Tenaya Capital. "Globes" named the company as one of Israel's most promising start-ups in 2009. It was founded in 2000 by CEO Yoav Shaham and COO Assaf Henkin. The company is based in San Francisco and has its development center in Herzliya Pituach. Kontera provides an advertisement platform for websites that hyperlinks words to external content.

Functionally, Kontera's solutions resembles Google's text-based advertising mechanism, AdSense, except that AdSense appears on the side of a webpage, while Kontera's product

appears within the text itself.

"We are excited to join forces with Adconion and Kontera, two companies that have led the industry with innovative marketing solutions and cutting edge technology to achieve outstanding returns for Fortune 500 companies," said Amobee CEO Mark Strecker. "Amobee offers the most advanced mobile advertising technology and solutions to large advertisers and publishers on a global scale. The digital advertising business is about scale and capitalizing on the market opportunities with technology as a core differentiator. With these two acquisitions announced today, we have extended our product offerings, increased our sales footprint and reinforced Amobee's leadership position in the fast growing digital advertising market."

"Data has become the essential ingredient to successfully reach the right customers with the right message at the right time," said Shaham. "Being a part of Amobee, we can more fully leverage our real-time content analysis platform across the entire digital ecosystem, enabling CMOs to measure and evaluate the success of their brand in ways never possible before."

Yes to veggies and no to bacteria!

Hebrew University graduate student wins Kaye Innovation Award for novel system that prevents microbial contamination of food packaging

Invention seen as having huge commercial potential

Eating fruits and vegetables is good for you, but sometimes there's a price to pay: illness caused by bacterial biofilms that adhere to the produce and to the packaging in which it's shipped.

Now a graduate student at the Hebrew University of Jerusalem has discovered a way to attack those bacteria on food packaging. Using

a novel packaging system to disrupt those bacteria, his invention has huge commercial potential.

recent immigrant to Israel from New York City. He is a researcher under the supervision of Prof. Doron Steinberg from the Biofilm Research Laboratory of the Hebrew University's Dental Faculty. Brandwein was one of two graduate students presented with a Kaye Innovation Award during the 77TH annual meeting of the Hebrew University Board of Governors on June 11. He will receive his master's degree in biomedical sciences at the Hebrew University this year.

terial biofilms are an ever-increasing problem in the food industry, especially for fresh produce. The US Centers for Disease Control and Prevention recently reported that food-borne diseases cause an estimated 48 million illnesses each year in the United States alone, of which 45% are caused by bacteria.

Industrialized countries have seen increased The Haifa municipality is about to call for bids for setting up a competitor to the TASE.

While the star of the Tel Aviv Stock Exchange (TASE) is fading, Haifa Mayor Yona Yahav is taking steps to establish another stock market in Israel. Sources inform "Globes" that the Haifa municipality is about to publish in the coming days a call for entrepreneurs to submit bids for setting up a new stock exchange specializing in technology companies that will compete with the TASE.

"The Haifa municipality believes that founding another Israeli stock market in Haifa, distinct from the existing stock market, is important," the call states. The solicitation is aimed at entities "with significant experience in the capital market and stock market trading" that can propose a business plan for establishing a stock exchange in the city. Under the Securities Law, the Min-

ister of Finance will decide whether to grant a license for managing a stock exchange.

The tender applies to "entities with proven capability and appropriate experience in capital market activity, securities trading, establishing a trading floor, knowledge in setting up the relevant computer systems, experience and knowledge in regulation, and familiarity with the regulatory agencies needed to establish the venture, including the ability to recruit investors."

stages that need to raise capital. The decision to specialize in technology companies arises from the fact that a number of leading technology companies operate in Haifa, such as Apple, Google, and Yahoo!, and the presence in Haifa of the Technion Israel Institute of Technology and the startups operating in it.

The Haifa municipality's decision to expedite the process of constructing a new stock exchange comes at a time when the TASE is at one of its lowest points. It is known that the TASE is at a critical stage, with plunging trading volumes and the delisting of public companies.

In addition, the choice of a stock market specializing in technology companies partly overlaps with the strategic plan recently formulated by the TASE. Yossi Beinart was appointed CEO of the TASE early this year for the purpose of engineering a significant change in that organization. In the published business plan for the TASE, Beinart noted that active measures were necessary to attract suitable small and medium-sized companies for listing on the TASE, including the assembling of a new package of offerings tailored to the relevant Israeli companies.

The TASE has already spotted the need of high tech companies to raise money, and has also established rules making it easier for R&D companies to issue their shares to the public.

At the beginning of the year, the committee for promoting investment in public companies operating in research and development published its final recommendations. **High-tech investment hits 10 year high**

dollars Venture capital fundraising down 28% in 2013

IVC: Israeli high-tech exits totaled \$6.64b in 2013

"The bullish US capital market and capital raising for technology companies via IPOs on Nasdag in the last 12 months have been drivers of venture capital, both globally and in Israel. Venture-backed revenue stage growth companies are raising substantially higher amounts of capital on average than in the past, positioning themselves for continued market expansion and significant acquisition and/or Nasdag IPO," said KPMG Somekh Chaikin Technology Group partner Ofer Sela. "This is an indicator of the maturity of the Israeli technology market and signifies that Israeli VC-backed companies are market leaders, providing more than just a 'great technology solution.' These later stage rounds are being led by investors who tend not to be venture capital investors. They ar bestong significantly higher valuations

Anti-tank missile defense system makes debut

The IDF, which has showed great interest in thesystem, has been involved in its development process, and planned to procure it. Operation Protective Edge in Gaza and the heavy mortar fire against the forces in the area, however, expedited its introduction into operational use. In recent days, Elta has delivered a number of such systems for use by the forces operating in the combat theater. It is not clear whether one of the systems was deployed yesterday afternoon near Kibbutz Beeri, where a mortar shell killed four IDF soldiers and wounded six others.

Swiss UAV procurement program will span over five years until 2020, when the Rangers will be phased out of service.

The proposed system acquisition, designated 'ADS 15' is likely to be included in the 2015 armaments programme submitted to the approval of the Swiss parliament. The first Hermes 900 drones are expected in Switzerland by 2017. Since its introduction in 2009 the Hermes 900 UAS has won Elbit Systems eight orders – from Israel, Chile, Brazil, Mexico and Colombia.

: Israeli start-ups raising record amounts
The \$643 million raised in the first quarter
was the second highest quarterly amount
ever raised.

Although Israeli high-tech start-ups raised less money in the first quarter of 2014 than in the preceding company, the \$643 million raised by 160 companies was the second highest quarterly amount ever raised, exceeded only by the \$801 million raised in the fourth quarter of 2013, IVC Research Center and KPMG Israel Somekh Chaikin announced today. Capital raised in the first quarter was 53% more than the \$439 million raised in the corresponding quarter of 2013.

High-tech investment hits 10 year high

dollars Venture capital fundraising down 28% in 2013

: Israeli high-tech exits totaled \$6.64b in 2013 "The bullish US capital market and capital raising for technology companies via IPOs on Nasdaq in the last 12 months have been drivers of venture capital, both globally and in Israel. Venture-backed revenue stage growth companies are raising substantially higher

amounts of capital on aver

In contrast to the rockets fired at the home front, there is usually almost no warning of mortar fire. Notice of the mortar fire frequently arrives after the shells have already hit the ground. Their short flight time makes it difficult for the IDF to provide warning to enable forces and civilians near the Gaza Strip border fence to take cover.

A previous examination by the defense establishment analyzing the threats of low-trajectory weapons, such as mortars and rockets revealed that in the Yom Kippur and Second Lebanon Wars, 30-40% of casualties were caused by these weapons.

When the system was unveiled a month ago, IAI said that the WindGuard system was quickly and accurately pinpointing the location from which the shooting at the area it was protecting came from. The system provides warning to the forces in the region in which the bombs are projected to fall, enabling them to take cover. In addition, it provides them with the precise location of the sources of the firing, enabling them to return fire and neutralize it. IAI says that the system can be installed on a wide range of platforms, such as all-terrain vehicles, armored personnel carriers, and other vehicles used by the forces in the field. Among other things, it can also be placed near positions and sensitive installations. Elta Systems said that WindGuard was based on complex software and an algorithm that have already proved themselves in operations.

Even though a mortar is a very static and primitive weapon, no real answer to it has yet been found. Because of its short range and flight time, Iron Dome is incapable of dealing with it. Sufficient warning of such a barrage can save many lives by enabling people to take basic defensive measures, such as lying on the ground, which significantly reduces the exposure to the many fragments.

Rafael Advanced Defense Systems Ltd. recently unveiled an intriguing development in dealing with the mortar threat. If it materializes, the IDF will be able within a few years to intercept mortar shells with a special solid-state laser ray. At this point, the system is being called "Iron Beam."

The new weapons: Trophy LV and Hermes 900

WindGuard is not the only system getting its first trial on the battlefield in Operation Protective Edge. Since the ground campaign began about 10 days ago, a defense system for tanks and APCs called Trophy LV developed by Rafael has been used for the first time under high-intensity combat conditions.

The system, which protects armored vehicles from anti-tank missiles, was declared operational as early as 2011, and has already prevented more than 10 hits on Israeli armor in the current campaign.

At the same time, due to budget constraints, a large proportion of IDF tanks and APCs are not yet protected by Trophy LV. One example was the M-113, an outdated APC, that was hit at the beginning of the land campaign in the Sajiyah neighborhood, killing seven Golani Brigade soldiers.

The Israeli air force's activity in Gaza also includes extensive use of drones, which are playing a major role in the current campaign. These have been joined in recent weeks by the most advanced drone manufactured by Elbit Systems Ltd. (Nasdaq: ESLT; TASE: ESLT) -the Hermes 900. The new drone can stay in the air a long time, taking an active part in the fighting, providing close support to ground troops, and providing them with real-time intelligence. In addition to Elbit's new drone, the air force is

also using Elbit's Hermes 450 and IAI's Shuval and Eitan drones.

Mobileye IPO haul over \$1b; share price soars Mobileye

The underwriters exercised their Greenshoe option after the share rose 48% on its first day on NYSE.

The amount raised in the IPO of Israeli driving assistance technology company Mobileye (NYSE: MBLY) rose to over \$1 billion from \$890 million, after the underwriters exercised their Greenshoe option. Lead underwriter Goldman Sachs reports that the final total reached \$1.023 billion.

Mobileye exceeds expectations, raises \$890m

On Thursday, the company raised \$890 million at a valuation of \$5.31 billion, higher than expected. On the first day of trading on Friday the share price rose steeply, closing 48% up at \$37. This takes Mobileye's market cap to \$7.86 billion, surpassing Amdocs (NYSE: DOX) at \$7.22 billion.

Mobileye has developed a system based on an artificial vision camera that reads the road ahead and helps drivers to avoid road accidents through audible and visual warnings of situations that could lead to a collision.

Delek Automotive Systems (TASE: DLEA), which held 4.7 million shares in Mobileye after the share split on the eve of the IPO, reported today that it had sold 36% of its holding in the company and would post a gain of some NIS 250 million in its second quarter financial statements. The remainder of its holding is restricted for 180 days.

Gamida Cell's main investors may sell all their holdings to Novartis at a later stage.

The deal for the sale of Gamida Cell developer of a stem-cell treatment for blood cancer, to Novartis AG (NYSE:NVS; LSE: NOV; SWX: NOVZ) is back on. This time, however, no huge exit in hundreds of millions of dollars is involved. The deal involved is in multiple stages, starting with an injection of several dozen millions of dollars into the company.

Novartis abandons plans to buy Gamida Cell

At a later stage, subject to meeting milestones, the existing shareholders in Gamida Cell, headed by Elbit Medical Technologies Ltd. (TASE:EMTC)(a 31% holding) and Clal Biotechnology Industries Ltd. (TASE: CBI) (a 22% stake) are likely to sell their holdings for a substantial sum. The two main owners today reported to the Tel Aviv Stock Exchange (TASE) that Gamida Cell was in "negotiations with a pharmaceutical company for signing an investment and option agreement." It appears that the company involved is Gamida Cell's former partner Novartis, which last May unexpectedly reversed its decision to acquire Gamida Cell.

Gamida Cell reported that the investment agreement with the investor (Novartis, E.P.) includes investment of a "substantial" amount for 5% of the company's shares, while Novartis MoneyTree: Q2 VC investment up 34% start up

37 venture capital backed companies raised \$233 million.

According to the PricewaterhouseCoopers MoneyTree report, investments in Israeli venture capital backed companies reached \$233 million in the second quarter of 2014, up 34% from the corresponding quarter of the previous year. From the beginning of the year, the companies raised \$465 million, up 25% from the corresponding quarter of 2013.



Please enroll me as a subscriber to the Israel High-Tech & Investment Report.

I understand that if not satisfied, I may cancel my subscription at any time and receive a refund of the unexpired portion. I enclose a check for \$95 (or the Israeli shekel equivalent and 18% v.a.t.) and am sending it to POB 33633, Tel--Aviv 61336.

I am providing you with my name, title, mailing address, e-mail, tele