

NEWSLETTER OF THE FRIENDS



האיגוד הקרדיולוגי בישראל
ISRAEL HEART SOCIETY



OF THE ISRAEL HEART SOCIETY



Editor's Note: Welcome to the Fall 2018 FIHS Newsletter. We wish all of our readers and members a Happy and Healthy New Year!

This issue will include its usual features- a message from our President, Jeff Goldberger, announcements of Cardiology Meetings, Heart Beats section, and a new Classified Section. We will move our Israeli Research review to the next Newsletter due to the large size of this issue.

We will also have pictures from the ACC meeting in March and the Israel Heart Society Meeting in April. In addition, we include other Israeli cardiology news of interest to our members.

Finally, we will continue to highlight our joint project with the Israel Heart Society to raise money to fund Israeli cardiology fellowships in the USA/Canada. We will once again link to an excellent video created by the Israel Heart Society to explain their needs and how we can help.

Please note- the description of new technology in our Newsletter does not constitute an endorsement. We just want to give our readership a sense of the vast scope of Israeli

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ingenuity in the fields of Cardiology.

Remember, this Newsletter and Society belong to you, the membership. We look forward to enhancing this Society and the connections that we hope to foster between Israeli and non-Israeli cardiologists and their institutions. Please feel free to email us with questions, answers, comments, criticisms, or just to tell us to keep working harder!

Our immediate goal is to try to grow our membership and participation to include any and all cardiologists and fellows from around the world who would be interested in supporting this bridging relationship. If you know of any cardiologists or cardiology fellows who we

can contact, please email me (my email is jackstroh@usa.net) and feel free to forward this Newsletter.



Message from the President

We extend to all the Friends of the Israel Heart Society our best wishes for a happy and healthy new year!

At this time of the year, as we each contemplate our accomplishments over the past year and our commitments for the coming year, I would like to ask you to include one small effort to

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help the Friends of the Israel Heart Society help the Israel Heart Society. The collective effort of all our friends can and will have substantial impact. I will propose three potential ways you can make a difference, but there are certainly more and I would encourage you to reach out to me to discuss novel ideas. We have a tremendous need to reach out to the many friends of the Israel Heart Society who still do not know about us and our programs – and would most certainly be interested in joining the Friends of the Israel Heart Society. We need you to reach out to your colleagues to identify these individuals. Another great way to support the Israel Heart Society is to travel to Israel and attend one of the top-notch cardiology meetings that

take place in Israel. There are general cardiology meetings and subspecialty meetings that are of the highest caliber. I have attended the Israel Heart Society meetings, the Intensive Cardiac Care meeting, and the International Dead Sea Symposium and can attest to the wonderful collegial environment and the opportunity to visit Israel and its many historic sites, as well as the great scientific forum. Finally, we can also use your help to launch our next initiative. One of our missions is to enhance training opportunities for Israeli fellows. We have provided support for travel awards for Israeli cardiology fellows to attend the American College of Cardiology meeting. We hope to provide further

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opportunities for advanced training for Israeli fellows at our institutions. This is a complex endeavor requiring both financial support for positions and institutional support for the logistics. This is a worthwhile endeavor – please watch the promotional video at <http://www.friendsihs.org>.

We could use your support!

We would like to hear from you regarding further programs or ideas that you would like to initiate!

We are now entering our 10th year of the newsletter. Special thanks to Jack Stroh for his continued energy and enthusiasm for leading the newsletter and kudos to all the contributors. Special thanks to Larry and Janice Brown for all their organizational support.

It is also a good time to check if you have renewed

your membership for 2018 - we would be delighted if you would consider a sponsorship level of support. We appreciate, in particular, those of you who have joined at one of the sponsorship levels. All the information is available on our website. Annual membership can be paid through the FIHS website at: <http://www.friendsihs.org/index.html>.

Finally, I want to thank all of our members who have donated their time and effort for the benefit of the Israel Heart Society. Please remember that our members are encouraged to send in news – personal and/or professional – to include in our **FIHS Heart Beats** section.

Thank you for your continued support!

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Once again, best wishes for a happy and healthy new year,

Jeff Goldberger, M.D.
President, Friends of the Israel Heart Society



New Project to raise funds for Israeli Cardiology Fellows overseas (reprinted from the last Newsletter)

The Friends of the Israel Heart Society (FIHS) is an association of health care professionals from around the world dedicated to support the delivery of cardiovascular healthcare, training, and research in Israel. This is our Mission.

Recently, our President Jeff Goldberger spoke with Drs. Glikson and Kornowski (the former President and current President of IHS) about how our Society could best help Israeli Cardiology. Both agreed that they really need help supporting more Israeli cardiology fellows to do their subspecialty training in the USA or Canada so they can bring back to Israel advanced expertise and capabilities. The Israel Health System currently does not have the resources to provide this advanced training at home, and these opportunities are costly to support. We estimate each fellow position would require raising \$60,000.

We learned of a currently successful program at Lenkenau Institute for

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Medical Research funded by the Lankenau-Israel Strategic Alliance (LISA) under the leadership of our Board Member Dr. Charles Antzelevitch, Executive Director of Cardiovascular Research at Lankenau Institute for Medical Research. This group raised enough for more than 2 fellowships with local fundraising dinners at donor homes, physicians and civilians.

Our hope is to expand on this excellent start in Philadelphia to the rest of North America. This video was produced by the HIS explaining the need for the program. If any of our readers have any ideas on how to raise funding or would like to spearhead the continental effort, please

contact me at
jackstroh@usa.net.



<https://www.youtube.com/watch?v=l00vxjoRAaQ&feature=youtu.be>



Classified Section

In this issue we debut our new Classified Section. This is open to any Program Directors, either in the USA, Canada, or Israel who have any position available for a cardiologist. We offer this as a service to our members and affiliated physicians worldwide, with this furthering our goal to be a

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bridge to connecting
cardiologists. Send all
requests to the editor at
jackstroh@usa.net.



with structural heart disease
interventions is an advantage.

For either position, there is a
clear prospect for promotion.

If you are interested or you
know someone who is, please
contact our friend and past
President of the Israel Heart
Society, Professor Michael
Glikson, MD:

Openings at Shaare Zedek Integrated Heart Center, Jerusalem.

The newly established Shaare
Zedek Integrated Heart Center in
Jerusalem is looking for a

-cardiologist with experience in
**cardiac rehabilitation and
preventive cardiology** to join
its Cardiac Rehabilitation
Institute. Preference given to
candidates with academic
experience and interest.

-**Echocardiographic specialist**
with experience in TEE, stress
echo, and 3-D echo. Experience

Prof Michael Glikson, MD
Director of the Jesselson
Integrated Heart Center
Shaare Zedek Medical Center
Jerusalem, Israel
Tel: +972-2-655-5974 or 5
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**Opening at Soroka
University Medical Center,
Beer Sheva, Israel**

The Soroka University Medical Center of Ben Gurion University of the Negev, in Beer Sheva is looking for an

-Expert in echocardiography and TEE for this very busy major tertiary care center. Structural knowledge is very welcome but not a must.

If you are interested or know someone who is, please have them contact our friend and President Elect of the Israel

Heart Society, Professor Doron Zahger MD:

**Doron Zahger, MD, FESC, FAHA
Director, Department of
Cardiology
Soroka University Medical
Center**

**President Elect, Israel Heart
Society**

**Kunin - Lunenfeld Professor of
Cardiology**

**Vice Dean for Academic
Promotions, Faculty of Health
Sciences, Ben Gurion
University of the Negev**

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Upcoming Meetings

**14th International Dead
Sea Symposium**

**David Intercontinental
Hotel, Tel Aviv**

October 28-31, 2018

<http://2018.idss-ep.com/>

TOPICS

MAIN TOPICS

Innovations in Cardiac
Implantable Devices*
Innovations in Ablation
Techniques*
Innovations in Imaging and
Navigation Techniques*
Innovations in Non-Invasive
Electrophysiology*
Heart & Brain: Newest
Approaches in Brain
Protection
Wireless Device Diagnostics
and Therapeutics
New Implanted Devices
(leadless, epicardial, subQ,
etc)
Remote Monitoring of
Implanted Devices
Cell-Based and Stem Cell
Therapy
Sudden Cardiac Death
Atrial Fibrillation
CHF
Clinical Trials
Controversy
Entrepreneurship in
Electrophysiology

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SPECIAL TOPICS

Cardiac Pacing
ICD
Out-of-Hospital Cardiac Arrest
Genetic Aspects of Arrhythmia
Arrhythmias in Childhood
Arrhythmias in Athletes
Syncope
Ablation of AF-various Techniques
LAA Occluders
Lead Extraction
Robotics in Electrophysiology
TAVI and Pacing
Basic Aspects of Defibrillation
Arrhythmias in Out-patient Clinic
Management of Recalls: Legal, Emotional & Ethical Considerations
Pacing & ICDs Registry
Healthcare Economics of Pacing and ICD

ORGANIZERS:

I. Eli Ovsyshcher
MD, PhD, FESC, FACC,
FHRS, MAHA

Professor of
Medicine/Cardiology
President of the IDSS

Michael Eldar
MD, FESC, FACC, FHRS
Professor of Cardiology
President of the IDSS

Michael Glikson
MD, FESC, FACC
Professor of Cardiology
President of the IDSS



ICI Meeting 2018

**The Premier
International Meeting
for Innovation in
Cardiovascular Systems**

**David InterContinental
Hotel, Tel Aviv, Israel**

December 2-4, 2018

<http://icimeeting.com/>

Meeting Topics:

FIHS is on the web at <http://friendsihs.org/index.html>.

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- The Vulnerable Plaque - Regression, Progression and Beyond
- Imaging, Physiology and Beyond
- Anti Platelet and Antithrombotic Therapy
- Stable and Unstable Coronary Syndrome
- Needs and Problems Around TAVR
- The Triangle of Innovation: Academy - Hospital - Industry
- Technology Parade - Devices / Imaging & Digital
- Chief Medical Officers - A Look into the Future
- Interventional Cardiology: Live from the Catheterization Laboratory
- Stents - Coating, Eluting and Beyond
- Israel-China - Wall to Wall
- Stroke and Neurovascular Interventions
- Structural Heart Disease
- Coronary Microcirculation
- Cell Therapy and Regenerative Medicine
- Mitral Disease - A Challenge to Innovators
- TAVR - Outcomes and Related Issues
- Autonomic Modulation and Beyond
- The Pulmonary Vasculature Hypertension and Beyond
- Out of the Box Novel Interventions
- Advanced Coronary Interventions
- Brain: Interventions and Protection
- Present and Future in the Cath Lab
- My Crazy TAVR Case
- Diabetes and Hypertension in Cardiology, what do we Need to know?
- Unfulfilled Needs & Therapeutic Achievements in Heart Failure

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- Devices in the Management of Heart Failure
- Vascular Session I - Thoracic Aorta
- Vascular Session II - Abdominal Aorta
- Vascular Session III - Carotid & Lower Extremity Interventions
- Vascular Session IV - Venous, AV access & Others
- Updates on Mitral Interventions
- Funding and Regulation in a Changing Market
- Bioresorbable Scaffolds
- Device Innovation
- Challenging Coronary Anatomy - CTO and Bifurcation
- The Tricuspid Valve - New Challenges
- TAVR - Current and Future
- DES, BRS & DCB - New Insights
- Developing Technologies in Heart Failure Diagnosis and Management

Faculty:

<http://icimeeting.com/meet-our-faculty/>

This is one of the top cardiology meetings each year, with meeting directors Rafael Beyar and Chaim Lotan chairing the meeting as well as the ICI Academy of Innovation Day- a full day pre-conference educational workshop satellite .



**The 66th Annual
Conference of the Israel
Heart Society in
Association with the Israel
Society of Cardiothoracic
Surgery, under the
Auspices of the Israel
Cardiology Association**

**David Intercontinental
Hotel, Tel Aviv**

April 30- May 1, 2019

**Details in the next
Newsletter**

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Israel Cardiology News

SAVE A CHILD'S HEART ORGANIZATION WINS PRESTIGIOUS U.N. AWARD

*To date, SACH has saved
the lives of more than 4,500
children with congenital
heart defects.*

BY JUDY SIEGEL

APRIL 3, 2018 16:29



*SACH courtesy photo shows Dr. Lior Sasson
with child from Romania after undergoing
surgery. (photo credit: Courtesy)*

FIHS is on the web at <http://friendsihs.org/index.html>.

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<https://www.jpost.com/HEALTH-SCIENCE/Save-a-Childs-Heart-organization-wins-prestigious-UN-award-547790>

Although the United Nations Security Council has tried to condemn Israel for its efforts to deal with [incursions from Gaza](#), the UN Population Fund has announced it is giving the 2018 Population Award to the Save a Child's Heart organization at Wolfson Medical Center in Holon.

To date, SACH has saved the lives of more than 4,500 children with congenital heart defects. The children have come from Africa, South America, Asia, Europe and the Middle East, including the Palestinian Authority. The organization has performed the operations free of charge at the government hospital and in some hospitals abroad, while training more than 150 medical personnel in these places.

Each year, the Committee for the UN Population Award honors an individual or institution for outstanding contributions to issues of population and reproductive health and to their solutions.

The award was established by the UN General Assembly in 1981 and was first presented in 1983. It consists of a gold medal, a diploma and a monetary prize.

SACH's goal is to improve the quality of medical care for children with heart disease from developing countries and to create skilled treatment centers in these countries. The organization was founded at the Holon facility in 1995 by Dr. Amram Cohen, a pediatric cardiothoracic surgeon. It aims at bettering the health and welfare of all children, regardless of their nationality, religion, color, gender or

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financial situation.

Save a Child's Heart holds preoperative and follow up cardiology clinics in Israel and abroad on a weekly basis. It offers a comprehensive training program in Israel for doctors and nurses from developing countries and leads surgical and teaching missions to partner countries.

Cohen immigrated to Israel from the United States in 1992. He joined the staff of the Wolfson Medical Center and served as its deputy chief and then director of pediatric cardiovascular surgery. The organization came into being when an Ethiopian doctor contacted Cohen after being referred to him by a mutual friend at the University of Massachusetts. He asked for Cohen's help with two children in desperate need of heart surgery, which

in fact saved their lives.

Cohen died almost 17 years ago from altitude sickness in a tragic accident while climbing [Mount Kilimanjaro](#), but SACH continued. Dr. Lior Sasson currently directs it at Wolfson.

Cohen once said, "I am convinced that for the vast majority of people who chose cardiothoracic surgery as a profession, idealism was initially a strong factor. For those of you who are reading this and just starting out, hold fast to your 'day-after' vision because if it fades, despite all the skills acquired, there will be something missing. For those who are searching, join us and together let us make the network to help children with heart disease globally, big enough to be equal to the task. There is work for everybody. There are no dollars and cents in it, but it is

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worth a fortune.”

Save a Child's Heart is currently building a children's hospital that will be named the Sylvan Adams Children's Hospital. It will serve as a SACH International Pediatric Cardiac Center and significantly improve conditions for the children of Holon, south Tel Aviv, Jaffa and Bat Yam.



Israeli Innovation

ECGs on the move, thanks to Israeli ingenuity

*ISRAEL21c talks with startups
devising wearables to measure*

*heart rhythm while you go
about your daily routine.*

By [Abigail Klein Leichman](#) APRIL 3,
2018, 8:00 AM

<https://www.israel21c.org/ecgs-on-the-move-thanks-to-israeli-ingenuity/>



ECG image via Shutterstock.com

That's how an ECG is done today. Advanced wearable technologies from Israel aim to change the procedure radically.

With

CardiacSense and HealthWatch,

all you'll have to do is put on a watch-like device or a special shirt and the ECG takes care of itself while you go about your day.

ISRAEL21c takes a look at these two close-to-market startups, plus two startups developing wearable sensor modules for measuring

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heart metrics, one for home use and one for hospital use.

CardiacSense



CardiacSense's Octo prototype.

Founded in Caesarea as Sportracker in 2009 to develop a watch-like wearable device for sports heart-rate readings, the company pivoted to medical monitoring about three years ago and rebranded as CardiacSense.

Clinical trials at Tel Aviv Sourasky Medical Center in 2016 showed the device achieves 99.9%

sensitivity and 99.01% specificity, on par with a conventional ECG but with the major advantage of noninvasive, electrode-free continuous monitoring.

Amnon Blanca of CardiacSense explains this level of accuracy is unmatched by other wearables using the same PPG (photoplethysmogram) technology that enables Apple watch, Fitbit and Samsung Gear to measure your pulse.

While PPG does a good job detecting heart arrhythmia, says Blanca, its accuracy is thrown off by certain hand and finger movements of the person wearing the device. CardiacSense's IP-protected solution eliminates these "movement artifacts" through a combination of optics, mechanics and an algorithm.

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If the PPG in CardiacSense detects atrial fibrillation, the common heart arrhythmia that signals a stroke risk, the user is instructed to place the fingers of the other hand on the crown of the watch to get an instantaneous ECG reading.

Including an ECG lead together with PPG technology is meant to encourage faster adoption of CardiacSense among cardiologists whose main tool is ECG.

“That’s what they’re familiar with,” says Blanca. “As the years go by they will probably start using PPG only.”

The combination of ECG and PPG also enables CardiacSense to be used for measuring blood pressure, one of the holy grails in the medical wearables market.

“All solutions available today for ambulatory blood pressure measurement are based on cuff devices, but ours is cuff-less and continuous,” says Blanca. “It would, however, require a short calibration using a cuff device to ‘learn’ the patient’s baseline.”

By end of this year, CardiacSense expects FDA and CE approval for heart arrhythmia detection, and for blood pressure measurement by the end of 2019 pending the successful completion of clinical trials now underway. In addition, the device can measure blood oxygen saturation.

Eventually the device will also be capable of continuously measuring temperature, breathing rate and heart failure. “People won’t need several wrist devices. We aim to be the watch that gives you the

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five important vital signs for your physician to monitor.”

Initially, CardiacSense will be for telehealth patients with a cardiac history. Blanca predicts that in the future wearable medical monitors will go from illness management to wellness management through big-data analysis.

HealthWatch



The Master Caution unit for service providers. Photo: courtesy

[HealthWatch](#) in Kfar Saba has pending orders for the soon-to-launch Master Caution, an FDA- and CE-approved digital garment embedded with 12-lead ECG monitoring electrodes. The

upcoming new model will be AI-based, with automatic analysis and event detection benefiting both patients and caregivers.

The smart digital garment also supports FDA-approved sensors to measure parameters such as heart rate, skin temperature, posture and respiration.

“We are not selling a garment. We’re selling a service,” stresses Gary Sagiv, senior director of business development and deputy CEO of HealthWatch. “People will buy the shirt from physicians or on the Internet, and they can log into a HealthWatch call center in any country for support.”

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Master Caution digital garment by HealthWatch. Photo by Shlomo Shoham.

The wearer presses a button to begin the ECG. Data is sent online directly to the physician or to a HealthWatch call center. The response is instantaneous and may be “Everything is okay,” “You should visit your doctor in the next few days,” or “Go to the hospital now.” The whole process takes approximately 51 minutes.

Noting that more than half the world’s population lives in isolated locations, Sagiv says many developing nations have expressed interest in Master Caution.

“The garment can be given to a nurse in a field hospital for her patients to wear — and the results will be sent to a doctor sitting in the regional health center. At our call center, a physician from China can sit and treat a patient from Sudan. This is globalization in every sense of the word.”

Master Caution also can be used for continuous monitoring of patients prone to cardiac events such as ischemia and arrhythmias; and for athletes who want to monitor their own vital signs.

The made-in-Israel Master Caution, made of a nylon blend, is home and hospital machine

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washable and comes in a range of sizes for men and women. The cost will probably be a couple of hundred dollars, according to Sagiv.

Upbeat Medical, BiPS Medical

[Upbeat Medical](#) of Tel Aviv was founded by Daniel Reisfeld, who has 40 years' experience in cardiac and other medical technologies. His aim is to bridge the gap between expensive, unwieldy medical-grade devices like the Holter ECG and affordable, user-friendly smartwatches like Fitbit.

Reisfeld is developing a small cardiac sensor module for smart wristbands, watches and bracelets to detect cardiologic parameters such as atrial fibrillation rather than just heartrate as wellness bands do. He plans initial testing

under the auspices of an Israeli medical center.

“We know that when the ability to self-monitor a medical condition is given to patients, their situation improves,” Reisfeld tells ISRAEL21c. “There is no reason medical devices cannot be as affordable as wellness solutions.”

[BiPS Medical](#) in Israel's Trendlines incubator is developing a wearable, wireless device to monitor and analyze vitals including blood pressure, heart rate, respiration rate and blood oxygen saturation obtained from multiple sensors simultaneously. The finger-worn device is designed to replace manual monitoring by nurses.



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How can you mend a broken heart? Here are

4 ways

*Israeli companies design devices
for the many patients whose left-
side heart chambers aren't
functioning well.*

By [Abigail Klein Leichman](#) JUNE 13, 2018, 8:04 AM

<https://www.israel21c.org/how-can-you-mend-a-broken-heart-here-are-4-ways/>



Hearts can be broken in so many ways, and aren't easy to fix.

We're talking here not about emotional hearts but about physical hearts containing four

chambers — left and right atriums on the top; left and right ventricles on the bottom — working together to circulate blood through our bodies.

Below we look at four Israeli startups with unique technologies for repairing or monitoring malfunctioning chambers on the left side of the heart.

First, a short anatomy lesson: The left atrium receives oxygenated blood returning from the lungs and pumps it into the left ventricle through the mitral valve. From there, the blood is ready to go on its bodily voyage.

Heart failure, affecting as many as 26 million adults worldwide, occurs gradually as the heart muscle weakens and struggles

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to do its job. The more common left-sided heart failure happens when the left ventricle doesn't pump efficiently. Blood backs up into the lungs, causing shortness of breath and fluid buildup.

With that background, we're ready to look at technologies focusing on left-sided heart failure.

Leviticus Cardio

Thousands of advanced heart-failure patients every year get an implanted mechanical pump called a left ventricular assist device (LVAD). The LVAD is connected to an external power pack by a wire ("driveline") to charge the batteries and must be worn 24/7.



Leviticus Cardio's wireless wearable charging system for implanted LVAD devices. Photo: courtesy

The driveline restricts mobility and is a source of infection and other potentially serious complications. Therefore, many patients who could benefit from LVAD therapy choose not to get implanted.

[Leviticus Cardio](#) has developed the only available wireless system for powering LVADs.

The Coplanar Energy Transfer

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(CET) system makes it safer to receive an LVAD and allows patients to remove the external hardware for eight hours at a time.

In animal studies conducted at the Catholic University in Belgium, the CET system was shown to work efficiently for months, and it's now ready for human trials.

Leviticus Cardio was founded in 2008 in Petah Tikva. Major investors include The Trendlines Group, medical and agricultural companies, a consortium of cardiovascular physicians, private investors and the Israel Innovation Authority.

CorAlert

Another Trendlines Group portfolio company, [CorAlert](#) is developing an accurate, low-cost, noninvasive detection and monitoring device measuring real-time left ventricular end-diastolic pressure (LVEDP), the standard way to detect and diagnose heart failure.

“LVEDP is always elevated in heart-failure patients and is elevated days or weeks before a severe condition appears, so it's very predictive for the prognosis of the disease,” explains CorAlert CEO Amir Marmor, a software engineer who founded the company with his father, Dr. Alon Marmor, professor of cardiology at Bar-Ilan University and former director of cardiology at Ziv Medical Center in Safed (Tzfat).

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Existing methods for measuring LVEDP are via a cardiac catheter or estimating pressure from Doppler echocardiography. Both have major drawbacks, and CorAlert aims to provide an alternative that cardiologists have been seeking for years, says Marmor.

CorAlert's system consists of two sensors: one placed on the chest and one on the arm inside a smart compression (blood pressure) cuff controlled by proprietary software that adjusts the pump to the patient's heart rate.

The sensors provide data on heartbeat and pressure from which LVEDP can be accurately estimated using a unique mathematical formula.

The beta model of the system is starting clinical trials at Ziv and at UC San Francisco Medical Center. "We will compare LVEDP measured by our device to invasively measured LVEDP and validate the accuracy of our device," says Marmor.

Founded in 2012 in Ramat Hasharon, CorAlert is now raising \$2 million.

Vectorious Medical Technologies

Moving up from the ventricle to the atrium, Tel Aviv-based [Vectorious Medical Technologies](http://vectoriousmedical.com) is developing V-LAP, the world's first miniature wireless microcomputer implant for left-atrial monitoring of heart failure.

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The company recently raised \$9.5 million, plus a \$2 million Horizon 2020 grant from the EU Research and Innovation Program, as it increases staffing and prepares for clinical trials leading to EU regulatory approval.

V-LAP transmits daily pressure readings to the physician, who can easily spot any changes and adjust medication accordingly to prevent deterioration – something not currently possible in real time. The system will include an external home unit for the patient to self-monitor changes as well.

Founded in 2011 in the RadBioMed incubator, Vectorious has 15 employees in Tel Aviv and at the Cleveland

Clinic, one of the company's investors.

“Chronic lack of supply to the heart is one of the most common causes of death in the Western world — 1.2 million people are hospitalized each year in the US from deterioration of the disease at a cost of \$32 billion to the US health system,” Vectorious CEO Oren Goldstein said.

“In addition, half of patients need to be re-hospitalized after six months because of defective diagnosis and treatment. Vectorious's product will prevent the disease from worsening, improve the quality of life of the patient and lengthen their lives.”

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V-Wave

Caesarea-based [V-Wave](#) recently got a \$70 million Series C investment that will help it move forward with clinical trials in North America, Europe and Israel of its V-Wave Interatrial Shunt System — a miniature, biocompatible interatrial implant to regulate left atrial pressure (LAP) in patients with chronic heart failure.

The shunt is intended to prevent episodes of elevated LAP and is thus expected to provide symptom relief, decrease hospitalization, increase exercise tolerance, improve quality of life and perhaps even extend survival.

Dr. William T. Abraham, chief of cardiovascular medicine at the

Ohio State University Wexner Medical Center, explained that elevated LAP is the primary cause of breathing difficulty and hospitalization due to worsening heart failure.

“V-Wave’s feasibility study results, presented in March 2018 as a late-breaking clinical trial at the American College of Cardiology, showed that shunting was safe and that morbidity and mortality were low compared to a matched population receiving optimal care. The upcoming pivotal trial in at least 400 randomized patients should provide sound assurance of the efficacy of this approach in patients that have a poor prognosis and few options,” said Abraham.



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Stories of Coexistence

We come across stories related to healthcare from time to time that show us how good the world could be if only we could get along with each other. Here is just one story of a Muslim EMT working for United Hatzalah of Israel:

https://israelrescue.org/blog/save-an-uncle-save-a-city-how-one-muslim-emt-created-a-revolution-in-his-city/?utm_source=United+Hatzalah+Communication+List&utm_campaign=ba95aea70d-EMAIL+CAMPAIGN+2017+12+10&utm_medium=email&utm_term=0_625ae64a2e-ba95aea70d-

Save An Uncle, Save a City – How One Muslim EMT Created a Revolution In His City

Posted on February 27, 2018 by [Raphael Poch](#)

For more than sixteen years Marwan Masarwe has worked as an ambulance driver and EMT. He used to go to work, help people while doing his job and then head home. But three years ago his daily routine changed, and so did the level of EMS

response in his entire home city of Taibe.



Marwan Masarwe treating an injured person in Taibe

“Three years ago, my uncle suffered a heart attack and collapsed on the floor of his home. My family, who was shocked by what had suddenly happened called an ambulance. They also called me as they know that I have the knowledge of how to help him. I rushed over and arrived in just a few minutes and began treating my uncle. The ambulance took a very long time to arrive. The fact that I had arrived in as short a time as I

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did, and began treating him, saved his life. This incident is what caused me to realize that I could help save lives when I am home and off-duty as well," said Masarwe.

Masarwe put his thought into action and approached United Hatzalah in an effort to open a chapter of volunteer responders in Taibe. He worked with the organization and developed a team of 15 fully trained and equipped responders just about a year later. "I approached people who lived in Taibe and who worked in the EMS field. Some were paramedics, while others were EMTs. When we started, we had 15 volunteers, now, just two years later we have double that number. People used to wait anywhere between 10 to 30 minutes for an ambulance in Taibe. Now, they wait less than three minutes for a volunteer EMT or paramedic to begin administering treatment."

Masarwe's rationale was to eradicate the time spent waiting by people waiting for an ambulance to arrive. "If it takes an ambulance a long time to arrive, say 20 minutes or more, than, in most serious cases the patient could, and often does, die while waiting for medical intervention. If we have people from the community who have the training and equipment necessary, then we can intervene and begin treatment while the patient waits for the ambulance team to arrive," he said.

Masarwe became the head of the new chapter in Taibe and he and his team of volunteer responders, who are all Muslim, provide treatment for residents of the city as well as the outlying towns, which include numerous Jewish towns as well.

"Lifesaving will always be a part of who I am. Now, I have become prouder of my involvement in the field. I am thankful that

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United Hatzalah has provided me and my fellow responders with a system that is capable of providing EMS services to anyone, anywhere and at all times.”

Masarwe is one 330 Muslim volunteers with United Hatzalah across Israel who provide free emergency medical services to anyone in need in their vicinity regardless of race, gender or religion.



Here is another story of
Peaceful Coexistence:

*Israeli,
Palestinian
Doctors Work
Together to Save*

Baby Born with Heart Defect

<http://www.thetower.org/6106-israeli-palestinian-doctors-work-together-to-save-baby-born-with-heart-defect/>



by [TheTower.org Staff](#) | 03.30.18 11:07 am

Doctors at both Israeli and Palestinian-operated hospitals joined forces to save the life of a Filipino baby boy in Jerusalem, The Times of Israel [reported](#) Thursday.

On February 14, Francis Joseph was born at the Red Crescent Hospital in East Jerusalem with a rare and serious heart defect, which required a complicated and risky open-heart surgery. The so-called “Jatene procedure,” which the Palestinian-operated hospital did not have the necessary facilities to perform, was however possible in Hadassah Hospital in

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the capital's Ein Kerem neighborhood.

When Dr. Julius Golender, a pediatric cardiologist at the hospital, received an emergency call from his colleagues at the Red Crescent Hospital, Golender consulted immediately with his fellow pediatric cardiologists from Hadassah, Dr. Juma Natshe and Dr. Sagi Gavri, who together came up with a plan to save the baby's life.

They first stabilized the newborn's critical condition by performing a procedure known as a cardiac catheterization before moving him to Hadassah Hospital for open-heart surgery. The Jatene procedure is named for its creator, famed Brazilian cardiologist Dr. Adib Jatene, who first performed it successfully in 1975.

"I was surprised when suddenly these experts from Hadassah showed up at the Red Crescent Hospital, and in my view it was a miracle," said Nina, the mother of the boy, who wanted to be identified by first name only.

"We did everything we could possibly do so that it would be possible to perform surgery on the newborn baby in Hadassah and fix

the heart defect that he was born with, which had caused this extremely complicated medical condition," said Gavri, soon after the catheterization.

The successful surgery took a little over five hours, according to the hospital.

The baby's mother, Nina, thanked the doctors and the hospital for stepping in and performing the life-saving surgery on her son. "We were undoubtedly very lucky that Hadassah got involved and saved my child and my family," she said.

A few weeks after the surgery, Francis Joseph was discharged from the hospital and allowed to go home. When he returned to the hospital a month later for a checkup, his doctors said he was "in good condition, active and smiley."



One More:

**SAVING LIVES IN
VOLATILE LANDS:
THE IDF'S MEDICAL**

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UNIT IN JUDEA & SAMARIA

Already this year some 2,000 people—about half of them Palestinian—have been treated by the Israeli army.

BY CHARLES BYBELEZER/THE MEDIA LINE

AUGUST 3, 2018 09:46
<https://www.jpost.com/Israel-News/Saving-Lives-In-Volatile-Territory-The-IDFs-Medical-Services-Unit-In-Judea-and-Samaria-564087>



An IDF medic administers initial treatment to a wounded Syrian in a military ambulance near the Israeli-Syrian border. (photo credit: REUTERS)

The West Bank, also known by its biblical name Judea and Samaria, is one of the most contested territories in the world. But driving through its rolling hills—a landscape dotted with olive trees, ancient stones and, increasingly, the location of top-notch wineries—is a stark contrast to the violent images that have come to define this land, claimed by the Palestinians but which the Israeli military has controlled since capturing the area from Jordan in the 1967 war.

I recently found myself entranced by this scenery, jolted back to the prevailing complex reality only upon fully conceptualizing the nature of my own immediate environment. This journey was no joy-ride; rather, a military patrol, and my host was Israel Defense Forces Officer Lt. Col. Dr. Ido Dachtman. He is not the type of soldier that makes front-page news; instead, his job is to [provide medical treatment](#), to both Israelis and Palestinians alike.

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"We are on-call 24 hours a day, seven days a week," Dachtman told The Media Line. "If there is a civilian with a heart attack, if there's a terror attack, we are always in a state of readiness.

"It is quite a hard life for medical personnel to serve here, but it is very fulfilling. It's very fulfilling."

Dachtman is based at the headquarters of the IDF's Judea & Samaria Division, from where he oversees approximately 100 personnel, spread out across six regional brigades, each one located in the vicinity of a major Palestinian city. Together, the team is responsible for all emergency medical services in the 3,000 square kilometer region.

The IDF crew responds to an average of three calls per day, coordinating its activities with the Israeli Magen David Adom and Palestinian Red Crescent health services. The crises

range from a Jewish woman with labor complications to a Palestinian Muslim cancer patient requiring transportation to an Israeli facility for treatment.

"The number one casualty maker in the Judea and Samaria area is car accidents by far," Dachtman said, as we approached the Rehilim juncture, where there is generally at least one fatal crash each month.

"We have a few spikes every year," he continued, "especially during Ramadan," the Islamic holy month when Muslims fast from sunrise to sundown. "This is because they do not eat or drive during the day, but at night they start their lives and some drive very recklessly I'm sorry to say.

"Of course," Dachtman expounded, "when there is an accident we do not ask questions or point blame. We are here to ensure that the wounded receive the best

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possible care."

Already this year some 2,000 people—about half of them Palestinian—have been treated by the Israeli army.

Instinctively, I asked Dachtman how Palestinians react to being helped by what many of them view as the "enemy." It quickly became apparent, though, that the topic was off-limits, too sensitive to venture down that road given the longstanding political and security tensions.

"There is coordination" was about all I extracted out of him, while nevertheless getting the impression that below the surface ties may run deep.

Dachtman did share one particular episode that has stuck with him, recalling how a Palestinian construction worker fell six stories from a structure and sustained a major head wound. The IDF called in an aircraft to evacuate the man.

"So we have a Palestinian

worker, taken to an Israeli hospital, by [IDF] soldiers," Dachtman noted. "It's nice, no?"

Shoval Golan is an Israeli paramedic who provided me with a first-hand view into a day in her life.

"I take care of Jews, soldiers, everybody, children and adults of all ages. We have all that is needed to treat people in the field," she told to The Media Line, adding that "most of our patients are Palestinian."

Golan proceeded to show me the insides of one the IDF's new ambulances, replete with state-of-the-art equipment, resembling a mobile trauma center. "It has most everything that a hospital does," she explained, while placing particular emphasis on a bottled liquid that in seven minutes can be transformed into the temporary equivalent of human plasma.

Few, if any, stories of Israeli-

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Palestinian cooperation are ever told, and this one goes firmly against the grain. The sides are not harming each other, but, rather, working in tandem to do the exact opposite.

One small deed for man, repeated enough times over, may be the key to achieving a giant step towards healing the divisions that have long plagued this otherwise beautiful place.

https://youtu.be/Ax8y_hPLYkA

(This is a video of the story).



March ACC- FIHS Wine and Cheese Reception

The ACC 2018 /FIHS Wine and Cheese reception took place on Sunday, March 11 at the Rosen Plaza Hotel. Here are some pictures of

the event and the happy attendees as well as from the Israel Heart Society booth at ACC (they have halva there, don't forget to visit next year!)



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Shimon Keinan, Givat Yoav. Below,
different types of kosher shofars.



My daughter Leora with Kudu shofar
horns, with the Shofar Whisperer,

Israel Heart Society Conference 2018

We had the pleasure of attending the 65th Conference of the Israel Heart Society this past April. As you all know from our announcements, this is a top notch, world class Cardiology meeting with Plenary Session lectures given annually by the Presidents of the ACC, AHA, and ESC, as well as other

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internationally renowned leaders in their fields. This editor looks forward annually to attending this wonderful meeting, with the major sessions being given in English. For more information, see here: <https://2018.en.israelheart.com/288-2/>.

The Richard, Hilda and Ezra Meltzer Memorial Award was established through the Friends of the Israel Heart Society in 2006 thanks to the generous support of the Meltzer family. Each year at our banquet at ACC, an Israeli cardiologist who has distinguished his/herself in cardiology research is awarded a grant to further his/her training experience at a US institution. The presentation is made at the HIS Conference. This year's

winner was Dr. Ashraf Hamdan, from Rabin Medical Center in Petach Tikva. His picture is included below. Congratulations!



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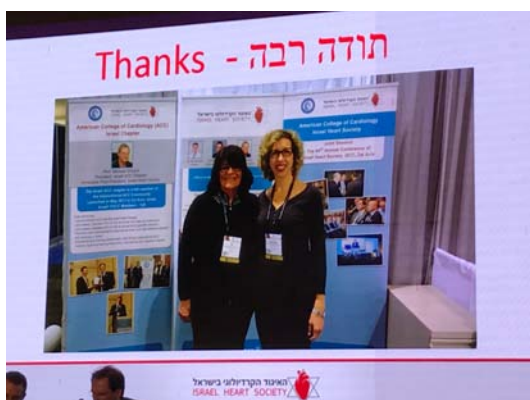
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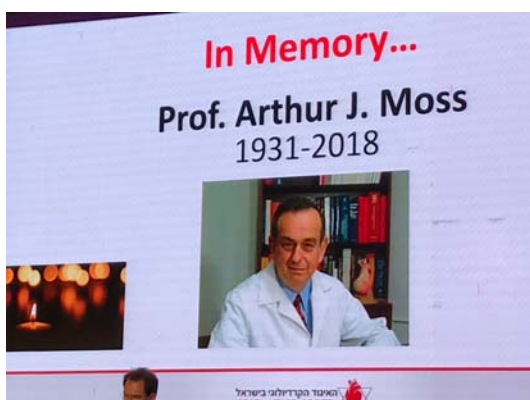
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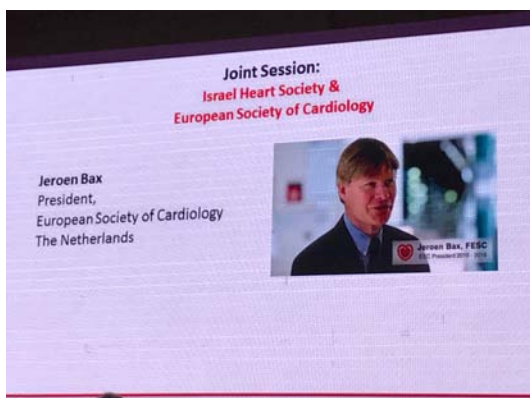
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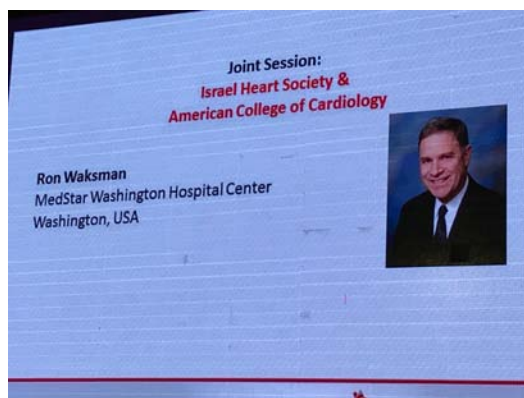
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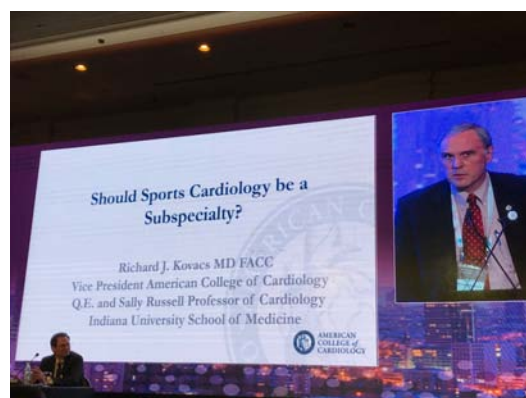


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12:45-13:10	Diabetes and CV Disease: What is the Role of GLP-1 Receptor Agonists? Dr. Verma Subodh Professor University of Toronto, Canada Research Chair (Tier 1) Cardiac Surgeon, St Michael's Hospital Chair, Cardiac Trials Platform, University of Toronto
13:10-13:35	Approach to Management and Real-World Cases of Diabetics with CVD Dr. Roy Eldor Director, Diabetes Unit, Institute of Endocrinology, Metabolism & Hypertension the Tel Aviv Sourasky Medical Center
13:35-13:45	Q & A
14:00-15:30	PL4 - Plenary Session IV- Joint Session: American Heart Association (AHA)- Israel Heart Society (IHS) Chairs: Ronen Rubinshtein, Doron Zahger, Israel Heart Society (IHS) John Warner, American Heart Association (AHA) ENG Hall ABC - Jerusalem
14:00-14:15	The Changing Landscape of Cardiovascular Risk: Investing for the Best Returns on Population Health John Warner President, American Heart Association, Dallas, TX, USA
14:15-14:30	How to Optimize AF Diagnosis and Management Mahmoud Suleiman Cardiology, Rambam Medical Center, Israel
14:30-14:45	VAD for Severe Heart Failure Patients, State of the Art Nir Uriel University of Chicago Medical Center, Chicago, IL, USA
14:45-15:00	Israeli Innovation in Cardiovascular Medicine: The USA Perspectives Ron Waksman MedStar Washington Hospital Center, Washington, USA
15:00-15:15	Advancement in CAD prevention: Lessons from FH? Ronen Durst Israel



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I would also encourage Israeli programs to let our membership know about happenings and offers for training in Israel: Please email these to me at jackstroh@usa.net.



FIHS Heart Beats



Here's another column from our own illustrious **Doug Zipes** which appeared earlier this year in the Saturday Evening Post:

http://www.saturdayeveningpost.com/2018/05/22/health-and-family/weekly-checkup-cybersecurity-medical-devices.html?utm_source=SilverpopMaili&utm_medium=email&utm_campaign=2018_05_26_Newsletter_NonSubs_Mobile%20%281%29&utm_content



Your Weekly Checkup:

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Cybersecurity of Medical Devices

By: Douglas P. Zipes, M.D.

Published: May 22, 2018



“Daniel, it’s me, John,” I said over the phone.

“Oof.” I heard him grunt in the background.

“What’s the matter?” I asked.

“This damn defibrillator. It’s shocked me five times in the last hour! Just keeps going off. I barely catch my breath when the next shock hits. I’m going crazy with it, Daniel. You’ve got to make it stop.”

“Call 911 and get to an emergency room. They’ll know what to do.” I

heard a crash. “John, did you hear me?”

No answer. “John? John!”

A woman picked up the phone.

“I’m John’s wife, Doctor. He just fell to the floor. He’s not moving! My God, I think he’s dead!”

This excerpt from my novel, *Ripples in Opperman’s Pond* (iUniverse 2013), depicts a man (John) with an implanted electronic defibrillator that has been hacked to deliver repeated shocks to his heart that eventually kill him.

Is this fiction that tells the truth? Can this happen in real life? Could malicious hackers inflict damage or disruption of normal implanted device operation by taking advantage of wireless software communication between health care providers and patients’ devices to jeopardize patients’ health or even kill them?

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Along with cyber-attacks of companies and countries, cybersecurity of implanted medical devices such as drug infusion pumps, electronic monitors, pacemakers, and defibrillators has been under [recent scrutiny](#). A [report](#) by Muddy Waters Research claimed that electronic medical devices manufactured by St. Jude Medical (now Abbott, St. Paul, MN) were at high risk for device hacking that could lead to rapid pacing and battery depletion.

However, [researchers](#) attempting to reproduce the Muddy Waters' claim failed to generate any clinical harm or affect essential device function.

Abbott has provided information on a [firmware fix](#) with enhanced cybersecurity for those wishing to pursue it. However, the reality is that no clinical reports of such hacking have been published, and most experts consider the theoretical risk of a

cybersecurity breach of an individual patient's device to be less than the actual risk of the firmware update. While most patients, after considering risks and benefits, reacted conservatively to the news of a potential device risk and decided not to undergo the fix, several thousand patients offered the firmware upgrade opted for it, and [underwent reprogramming](#), generally without problems.

It is important to stress that the cybersecurity risks to health care are not restricted to Abbott, or to implanted medical devices. The risks exist for any healthcare system connected to the Internet, more so for large facilities such as hospitals than for individual patients. Hospitals are prime targets, especially since personal health information can be worth millions of dollars. A cyberattack can disrupt an entire hospital system,

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compromise medical records and put patients at risk. Many pieces of medical equipment have computing and other needs requiring Internet connectivity that can make them vulnerable to attack. Constant security surveillance is critical. As a case-in-point, recall the 2017 global cyberattack with the WannaCry virus that crippled the UK's National Health Service and FedEx, and infected more than 300,000 computers in 150 countries. It was dubbed "the biggest ransomware outbreak in history."

Hacking of individual medical devices may just be a thing of novels. So, those of you with pumps, pacemakers and defibrillators can relax — at least for now. But in the future...?



Are you a member of FIHS and have major news you would like to share with our readers? Have you published a book or been honored by your Society? Share it with us all! Please email these to me at jackstroh@usa.net.



That's it for this issue of the newsletter of the Friends of Israel Heart Society. Our next issue will have some Israeli research articles and a special interview with former President Michael Glikson, who is now Director of Integrated Cardiology at Shaarei Zedek Medical Center.

Special thanks as always to **Batia Ziv** and **Karen Davidson** for being our

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“eyes and ears on the ground” in Israel. Special thanks in America to our Society Administrators-
Janice and Larry Brown!

Have any ideas to make this a better tool for our Society? Share them with us!

Tell your friends that we want them to join our mission to be a bridge between Israeli Cardiology and the world. If you have any questions, comment, criticisms (my favorites!) please email me at jackstroh@usa.net.



L' Shanah Tovah
Have a sweet year!

