Rambamon ISSUE No. 21 | APRIL 2018

Helmsley Health Discovery Tower Scaling the Heights of Medical Innovation

Global Medicine

Donor Spotlight

בית חולים רות רפפורס לילדים אלי וגדוינגא אמאתם וות הפפורס לילדים Hip Replacements That Don't Need Replacing

Cancer Prevention Made Personal

Not everyone needs the same tests

A Doctor-Patient Story A remarkable woman remembered

RAMBAM Health Care Campus Creating the future of medicine.





Dear Friends,

This issue of Rambam on Call, with its focus on technological innovation, could not be timelier, with the recent announcement by the Helmsley Charitable Trust of their lead gift to build the Helmsley Health Discovery Tower. As you will find in these pages, the Helmsley Health Discovery Tower represents a unique model of institutional collaboration, between Rambam, the University of Haifa, and the Technion. This notable cooperation, made possible through the visionary support of the Helmsley Charitable Trust, advances the healthcare, research and educational missions of each institution. But together, the opportunities for synergy and collaboration, within the tower, with Rambam's clinical environment, and with Haifa's biomedical research and development centers, are limitless.

I am often asked, as head of a busy government hospital, why add such an ambitious research program to an already demanding mandate? For us, the answer is simple. The exceptional creative and innovative capacity found within Rambam must be cultivated, for the benefit of our patients and humankind. Supporting young physician-scientists through one of Rambam's research grant programs is a very rewarding way to make an impact and help bring promising ideas to life.

We are very excited about the progress being made on the plans for the new Eyal Ofer Heart Hospital. Ultimately, the painstaking efforts invested in every detail will result in a hospital that sets a new standard for the entire country.

To all of our friends, I would like to take this opportunity to express our deepest gratitude for your partnership and support. As we open the celebrations for Israel's 70th year, and Rambam's 80th, let us continue to work together to build our dynamic and healthy nation!

RAMBAM 80

Health Care Campus

Yours,

PROF. RAFI BEYAR

R. Beyr.

Director and CEO Rambam Health Care Campus

HAPPY ANNIVERSARY to ISRAEL 70 & RAMBAM80

Eighty Years of

and Humanity

Excellence. Innovation

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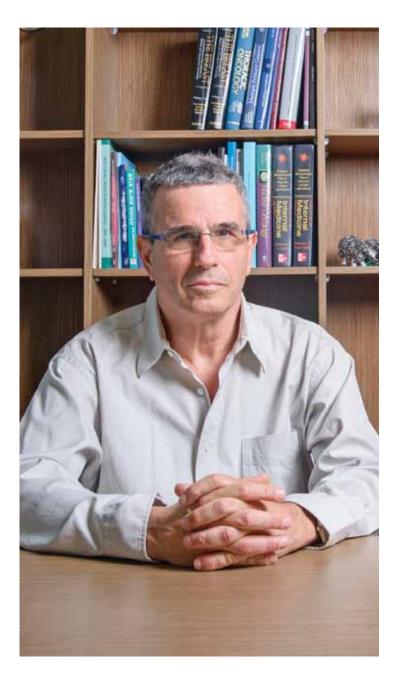
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Haviva's Story

An oncologist and a husband recall an unforgettable woman's odyssey



Introducing: Prof. Ron Epelbaum, Director of Joseph Fishman Oncology Center, and Avshalom Nussbaum, husband of Haviva Nussbaum (z["]I).

Meeting at: the Oncology Institute at Rambam

Prof. Epelbaum: Haviva Nussbaum was 61 years old when she first came to us in 2007, with pancreatic cancer that was advanced and inoperable. I started Haviva on a regimen of chemotherapy and radiation which, in only a small percentage of patients in her condition, can reduce the size of the tumor to the point that it becomes operable. And this is what happened with Haviva. After the surgery, other tumors appeared, but with additional chemotherapy, we were able to control the disease and she had four good years without treatment.

In late 2012, the disease spread to Haviva's lungs and bones and again she received chemotherapy and radiation treatments. This was a difficult time for her. She lost weight and energy. There were advances and setbacks, but at a certain point the treatments were no longer effective.

I'll always remember: Haviva was an incredible, optimistic woman. Through the ups and downs of her treatments, she remained positive and open to new possibilities. Her husband, Avshalom, never left her side, accompanying her through all her treatments. He is a warm and loving man and they complemented each other.

Haviva's illness was an exceptional case. The life expectancy for patients in her condition is very short - about one year. Haviva lived much longer. There are, in fact, tumors that progress more slowly, and she did indeed respond well to the treatments she received over the years. But you can't ignore the contribution of Haviva's determined and vital character, and the care and love she received from her husband.



Avshalom Nussbaum, 70: Haviva and I were married for 47 years. We have three children and 10 grandchildren. Our family is close and strong, and Haviva was its backbone. Eleven years ago, when we were both retired, Haviva was diagnosed with pancreatic cancer. We learned everything we could about the disease, and were hopeful that we could overcome it, or at least gain more time.

Haviva was first treated at another hospital and we almost lost hope there. But when we moved to Rambam's Oncology Department, things looked much brighter. The staff treated us like we were special, and Prof. Epelbaum, who at the time was an attending physician, patiently explained everything we wanted to know, and gave us the hope and energy that sustained us.

At his recommendation, during the last months of her life, Haviva received her treatments at home. But when her condition deteriorated, we returned to Rambam. We knew where this was leading. Six months ago, Haviva passed away. After she died I found letters she wrote to me and the children with one simple message: take care of yourselves and each other. That is the most important thing in life, and I will take care of you from above.

My unforgettable moment: Haviva made sure that our children and grandchildren would spend Shabbat and holidays with us. Even at the height of her illness, she cooked, kept the house in order, and bought gifts for the children. One day she was resting in the living room, weak and in pain, when one of our granddaughters asked, "Grandma, you promised us that you would get better and you're still sick. See how we take care of you and you'll get better." The grandchildren decorated a shoebox and put letters into it for her, which she answered and returned, with candies, to the shoebox. They called this "grandma-post."

Most patients with pancreatic cancer live less than a year. Haviva survived 11 years! She was strong, determined and hopeful. She drew strength from her family, the doctors and medical staff who cared for her, and from her faith.



Helmsley Health Discovery Tower

With support from The Leona M. and Harry B. Helmsley CharitableTrust, a unique partnership is Scaling the Heights of Healthcare Innovation

» Abbie Rosner

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srael's unique status as "the Startup Nation" is now legendary. But experience has shown that having good ideas is not enough, and that creativity and innovation need a supportive environment to truly thrive. This is the vision behind the new Helmsley Health Discovery Tower.

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The Helmsley Health Discovery Tower is an entirely unique concept - a worldclass hub of innovation in life sciences, public health, biomedical engineering and pharmaceutical research, shared by three partner institutions: Rambam, University of Haifa and the Technion. Within the planned 20-story structure, space will be allocated to each of the partners for their dedicated healthcare, teaching and research activities. Furthermore, it will provide a fertile environment for medical innovation development by industry startups.

Mr. Sandor Frankel, a trustee of The Leona M. and Harry B. Helmsley Charitable Trust, observed that the new tower "... will improve access to health care in the northern periphery of Israel, strengthen the region, and support greater collaboration among Rambam, University of Haifa and the Technion–three of Israel's great institutions–as well as with the medical and biotech industry."

The project's shared mission of excellence in healthcare and promoting medical innovation is consistent with the goals of the Helmsley Charitable Trust, to strengthen healthcare services and contribute to Israel's scientific, technological and medical leadership.

Israel's Minister of Finance, Mr. Moshe

Kahlon, celebrated the new initiative as "a flagship project for the city of Haifa and northern Israel." And Prof. Rafi Beyar, Rambam's Director and CEO, noted that the new project will enable us "to help not only the people of Israel but to impart critical knowledge across the globe."

A Dynamic Hub for Medical Innovation

The tower's ground floor will feature a Congress and Exhibition Center for the use of all the tower's occupants. Two floors of the Helmsley Health Discovery Tower will house laboratories for the Clinical Research Institute at Rambam (CRIR) working in the fields of hematology, nephrology, cardiovascular medicine, gastroenterology, brain and neuroscience, cancer, diabetes, obesity and endocrinology. The five floors above CRIR will accommodate Rambam's Ophthalmology Institute, Gastroenterology Institute and School of Graduate Dentistry.

University of Haifa will occupy six floors with research centers in public health, evidence-based nursing and health sciences and natural sciences. The Technion's Faculty of Medicine will use two floors for a new multidisciplinary medical engineering center, and the top four floors will house an "Innovation Center," with facilities where Rambam physicians and local and international biomedical startups can test and develop their commercially viable ideas.

Creativity, Collaboration and Convergence

The Helmsley Health Discovery Tower has been designed to create a fertile microcosm where the most creative ideas



can be conceived and developed. The proximity of professionals from different medical disciplines will foster the kind of dialogue that can spark game-changing breakthroughs. And the convenient access to Rambam's clinical departments will facilitate collaborations to develop and test new medical innovations that will benefit patients at Rambam and around the world.

Israel's biomedical innovation ecosystem is thriving, and Rambam is a key player in developing new medical technologies. Rambam offers research grants and the support of Med-Tech, the technology transfer company established to help Rambam's physicians and nurses develop their promising ideas. Through its partnership in the digital medicine incubator MindUP, Rambam is collaborating with IBM, MedTronic, Pitango Venture Capital and Impact First Investments to develop the next generation of digital medical applications and wearable medical devices. At the heart of this dynamic medical innovation cluster, the Helmsley Health Discovery Tower will secure Rambam's position as a basic and clinical research leader, in Israel and worldwide.

A Partnership Based on Shared Vision

The vision and support of the Helmsley Charitable Trust was also instrumental in developing Rambam's Sammy Ofer Fortified Underground Emergency Hospital. In recognition of their extraordinary commitment to improving healthcare for the people of Israel, and especially those living in Israel's periphery, the Helmsley Charitable Trust and Trustee Sandor Frankel received the 2016 Rambam Award.

> The Helmsley Health Discovery Tower will be erected on Rambam's West Campus, one of the most ambitious expansion plans in Israeli history. Rambam has built, from the ground up - and down - an entirely new and modern campus, designed to foster excellent and secure medical care and innovative research. On the new West Campus, the Helmsley Health Discovery Tower will join the Sammy Ofer Fortified Underground Emergency Hospital, one of the largest facilities of its kind in the world, the spacious and modern new Ruth Rappaport Children's Hospital and Joseph Fishman Oncology Center, and the state-of-the-art Eyal Ofer Heart Hospital, now under construction.

Hip Replacements That Don't Need Replacing

Artificial hips crafted from a highly durable polymer first developed for NASA are designed to last a lifetime. Through a new clinical collaboration, these space-age hip joints are now available to Rambam patients.

>> Abbie Rosner



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For millions of adults, a hip replacement signifies a return to mobility and relief from debilitating pain caused by rheumatoid arthritis or simple wear and tear. Hip replacement, also called hip arthroplasty, involves replacing a damaged section of hip with an artificial joint, usually crafted from metal, ceramic and/or very hard plastic. Typically, hip replacements are recommended when hip pain interferes with a person's normal activities, and does not respond to standard treatments.

Hip replacements have been a common procedure for over four decades. But the materials the artificial joints are composed of often don't stand the test of time. Natural erosion as well as exposure to high shear stress levels and corrosive biological conditions can cause the materials in the hip implants to degrade. Particles of polyethylene released from the implant can cause a physiological reaction that weakens the anchoring bone. As a result, the bone may crack, break, or the implant may detach from the bone, leading to pain, limited movement and the need for revision surgery.

Revision surgeries to correct a faulty hip replacement can be more complicated and less successful than the original

A new solution for hip implants, developed by Israeli scientists and tested at Rambam, promises to make hip replacements a once in a lifetime experience.



procedure. Yet as the population with hip implants is not only growing, but growing older, and younger implant recipients lead more active lifestyles, the need for these corrective procedures is growing as well.

An Artificial Hip for Life

A new solution for hip implants, developed by Israeli scientists and now being tested at Rambam, promises to make hip replacements a once in a lifetime experience. Researchers at MMA-Tech, an Israeli technology startup, took a highly-durable and flexible material first developed to replace steel ball bearings for the US National Aeronautics and Space Administration (NASA) program, and adapted it to create MP-1, a proprietary polymer for use in medical devices.

For prosthetic hips, the company used MP-1 to line the cap in which the femoral ball is positioned, to create an implant that is not expected to break down or fail over its lifetime. MP-1 is biocompatible, lowfriction, heat-resistant, and self-lubricating, all qualities that enhance the functionality and longevity of hip implants. And because MP-1 is three times more durable than existing materials, and doesn't react to substances within the body, the chances of bone erosion and breakage are minimal. This innovation promises to prevent needless suffering from repeat surgeries, and lead to significant savings for the healthcare system.

After MMA-Tech successfully tested its MP-1-based artificial hip solution on over 70 patients in New Zealand, they received approval to market the product in the European Union. Now, the hip implants are the focus of a clinical trial at Rambam, a major milestone on the way to the US FDA.

A Boon for Rambam Patients

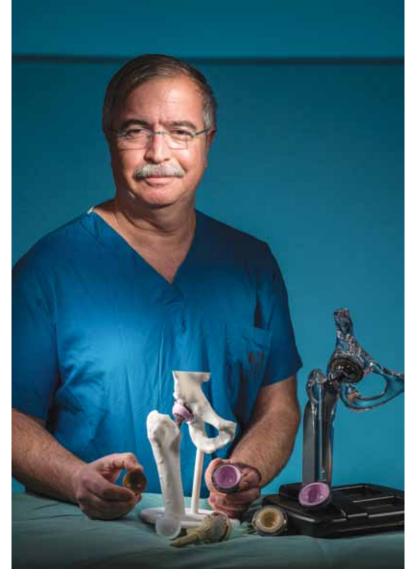
Overall, fifteen patients at Rambam will receive the new hip implants developed by MMA-Tech as part of the clinical trial approved by the Israeli Ministry of Health and Rambam's Institutional Review Board. The first three hip replacements have already been performed on a 60-year-old woman with a hip fracture, a 48-yearold woman with bone disease, and a 68-year-old man with osteoarthritis. Dr. Daniel Levin, Director of the Joint Surgery Service and a specialist in hip replacement surgery at Rambam, performed these surgical procedures under the auspices of the Orthopedic Surgery Section, headed by Professor Doron Norman.

Dr. Levin explains, "For over 20 years, we have been trying to improve the longevity of hip implants. The problem of prostheses not adhering to the bone has basically been solved with new surface materials. The more serious problem has been how to overcome the degeneration of the implant over time, and the resulting damage to the bone.

"When MMA-Tech approached me with a solution that promises to overcome this intractable problem faced by the entire orthopedic world, we were excited to try it. While it's still too early to reach any long-term conclusions, so far the results are excellent and we are optimistic. We expect that this new material will offer long-term durability and a better quality of life for hip implant recipients."

The Growing Demand for a New Hip

Hip replacement is one of the most commonly performed orthopedic surgeries. A recent study conducted



by the US National Center for Health Statistics found that the number of hip replacements performed doubled between 2000 and 2010, with particularly notable increases among patients in the 45–54 and over-75 age groups. For middle-aged patients, degenerative arthritis resulting from wear and tear is the most common reason for hip replacement. Sports injuries and trauma are resulting in a younger group of candidates for this procedure.

Advanced surgical techniques have made hip replacement easier, with shorter hospital stays and quicker recovery times. But improvements in the actual prosthetic joints have been slower in coming. But according to Dr. Levin, "The new hip implants now being tested at Rambam may well be the development we have been waiting for." Medical Consultant:



Dr. Daniel Levin Head of Joint Surgery Service, Orthopaedic Division, Rambam Health Care Campus

Innovations of a Diabetes Specialist

Infant formula enriched with insulin, and special protective glasses. Two new innovations developed at Rambam are poised to improve the health of newborns and protect against diabetes-related blindness

» Naomi Cohen





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or Prof. Naim Shehadeh, Director of Rambam's Endocrinology, Diabetes and Obesity Center and President of the Israeli Diabetes Association, helping patients overcome this prevalent disease has been the focus of his entire professional life. So it may not be surprising that he had several bright ideas for diabetes treatment and prevention along the way.

Prof. Shehadeh is one of a distinguished group of Rambam physicians who are also inventors. With Rambam's support, they are encouraged to develop ideas that are born at the bedside and have the potential to improve patient care. In the coming months, Prof. Shehadeh will reach significant milestones on two innovative projects he has been developing over the past 15 years.

Insulin-Enriched Infant Formula

"Many epidemiologic studies have shown that breastfed infants are less likely to develop type 1 diabetes," Prof. Shehadeh explains. Intrigued by this finding, he decided to investigate whether insulin, the hormone responsible, among others, for regulating blood sugar, could be the critical element in mother's milk that was exerting such a powerful protective effect.

"We and other researchers found that infants have receptors for insulin in their nascent gastrointestinal tracts. As the receptors interact with the insulin in the mother's milk, this promotes the maturation of the GI system, including the development of digestive enzymes.

"The second step was to check existing infant formulas on the market. We

found that they contained protein, carbohydrates, fats and minerals in concentrations similar to those found in mother's milk. Yet for the formula to truly simulate mother's milk, it needed to contain enzymes and hormones, including insulin. Of all the formulas we tested, none contained insulin.

"Hormones like insulin are very delicate and would be destroyed during the manufacturing process. From here came the idea to produce infant formula containing 'live' insulin."

How was this achieved?

"We worked with the Technion's Food Engineering Department to develop a microencapsulation process that would protect the insulin during processing and maintain it over time. When added to infant formula, it produces a concentration of 90 micro-units of insulin per milliliter, which compares to 30-100 micro-units found in mother's milk."

What did your research entail?

"We decided to test the insulin-enriched formula on premature infants born before week 30 of pregnancy. Because the GI tract of premature infants is immature and incapable of digesting food, they are initially fed intravenously for 1-3 weeks. IV feeding is highly expensive and associated with numerous complications, risks and longer hospitalization periods."

What did you find?

"We saw that orally administering the insulin-enriched formula significantly accelerated the maturation process of the infants' GI tract and greatly limited the need for IV feeding. This in turn, shortened the time until the infant could be sent home from the hospital."

The first study stage, which included 10 premature infants, confirmed the formula's safety. The second stage included 33 premature infants in different hospitals in Israel. The third and final stage, currently underway, will ultimately include 500 preemies, and be finished by the end of the year. "I anticipate that the connection between the maturation of the GI system in premature infants and the administration of our formula will be clearly demonstrated. After that, we expect to receive approval from the FDA, and the Israeli-developed insulin-enriched formula would then become available around the world. It will ultimately benefit not only premature infants but infants that are not breastfed as well."

Special glasses for individuals with diabetes

Diabetes is one of the most common diseases in the world, and its incidence is steadily growing. Among the many complications of diabetes is damage to the eyes from cataracts or retinopathy.

Prof. Shehadeh: "We asked ourselves why the blood vessels of the retina are so severely affected, when immediately behind the retina no damage is evident. We surmised that the light penetrating into the eye could be involved. We also noted that diabetics who have cataracts removed experience accelerated retinal damage, hinting that the cataracts may have protected the retina from sunlight."

Does all light cause retinal damage?

"No. My hypothesis was that only certain parts of the visible light spectrum cause damage to the retina. I shared this insight with Prof. Ido Perlman, an expert in retinal research at the Technion Faculty of Medicine, and over the past eight years we have been studying this issue.



Professor Shehadeh and a young patient

How did the study work?

"We exposed diabetic rats to light with filters for different wavelengths. We found that blocking light at wavelengths of 400-530 nanometers protected the rats from developing retinal damage (only wavelengths of 400 nanometers and above are visible to the naked eye).

The next stage was to develop lenses that filter out this spectrum and prevent it from penetrating the eye. At this point, we have produced the filtering lenses in both transparent and tinted options."

When will these protective glasses become available?

"Our special optic filtered glasses should be commercially available in Israel by the end of the year, and will eventually be marketed in Europe and the United States as well." Medical Consultant:



Prof. Naim Shehadeh Director, Institute of Diabetes, Endocrinology and Metabolism Rambam Health Care Campus, President, Israel Diabetes Association



Cancer Prevention Made Personal

Rambam Opens a One-Stop Center for Early Cancer Detection

>> Abbie Rosner

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ifty-two-year-old Alex, an accountant from Haifa, was long overdue for an annual checkup. But somehow, he always seemed too busy. In fact, Alex dreaded being told what he already knew - that he needed to lose weight and stop smoking. But after he developed persistent heartburn, Alex couldn't put things off any longer. When a colleague told him about Rambam's new interdisciplinary preventive health service, where he could have all his periodic exams and cancer screening done at one time and under one roof, he knew the time was right.

When Alex arrived, a full schedule of routine and cancer-screening tests had already been arranged for him, including consultation with a general practitioner, vision and hearing exams, a stress test and a urological exam. Because Alex is a smoker, he was also tested to identify any early signs of cancerous lesions.

But Alex's heartburn raised a red flag for Dr. Elizabeth Half, a gastroenterologist and specialist in familial cancer syndromes, who also heads the early cancer detection and prevention clinic. After reviewing his personal and family history, Dr. Half wanted Alex to be checked for Barrett's esophagus, a pre-cancerous condition that can effectively be treated if caught in time.

> "Cancer is not only a matter of destiny." Dr. Half emphasizes. "In my practice, I kept hearing stories from people whose cancer could have been prevented if they had been aware that they were at risk." With this in mind, Dr. Half proposed to

Rambam's executive leadership that a cancer early detection and prevention service be created that would be convenient, simple and efficient. Furthermore, unlike other centers where all patients receive the same battery of tests, Rambam's service would offer exams tailored to each patient's unique health profile. And it would do this by leveraging Rambam's excellent physicians and facilities to extend the benefits of top quality personalized medicine to every patient.

"Once Rambam gave me the green light," Dr. Half explains, "I assembled a team that included a family medicine specialist. gynecologist, urologist, breast surgeon, maxillofacial specialist, plastic surgeon, ear, nose and throat specialist, geneticist, medical imaging specialists and obviously myself as a gastroenterologist. Each one of us shared the risk factors for the types of cancer in our fields, the screening protocols we use and populations at risk. Then we all sat together and figured out how this would work. What we came up with is a one-stop shop for annual checkups that covers both routine exams for general health and a comprehensive range of cancer prevention screening services."

After a full year of planning, the new center welcomed its first patients in October. "This service is for healthy individuals - with the intention of helping them stay healthy. "Before their appointment, patients fill in a comprehensive questionnaire covering their personal and family medical histories. Based on their answers, a schedule of tests and exams is set for each patient. Once they arrive at the center, a nurse practitioner draws blood and the examinations begin. If a woman needs a mammogram, it is performed that same day. And if the breast specialist decides that a subsequent ultrasound test is called for, an appointment is made on the spot so the patient isn't left with only a referral.

For Alex, Dr. Half prescribed a gastroscopy to evaluate his risk for esophageal cancer, as well as a screening colonoscopy, routine for individuals over 50 without a family history of colon cancer. Before he left for home, the clinic's assistant had already made appointments for both procedures.

Disease prevention that is personalized and accessible

["]By adding a full range of early cancer detection and screening options to the routine tests, we are making disease prevention and healthy living more personalized and accessible. During a single morning, women can receive a mammogram and pap test, and men can be examined by a urologist for early detection of prostate cancer. A full skin exam by a dermatologist can detect possible malignancies, and if any are found, a plastic surgeon will plan for their excision. For smokers, a low dose CAT scan and consultation with ear nose and throat and maxillofacial specialists can detect early signs of lung cancer or lesions in the mouth or throat. Patients also meet with a dietician who can guide them on how to adjust their diets to improve their health and lower their risk of cancer.

Same-day genetic testing

"One unique feature we offer that isn't found in other hospital screening programs is our genetic testing service. Rambam has an excellent Genetics



This service is for healthy individuals – with the intention of helping them stay healthy." Dr. Elizabeth Half



Institute and we take advantage of their expert staff and facilities to serve our patients. If we see evidence of a personal or family history of relevant cancers, the patient receives genetic counseling the same day. And if someone is diagnosed with cancer, we encourage their family members to come to us to be tested as well," Dr. Half explains.

"We understand that our patients are busy and need to maximize their time. To make things easier, we offer them free parking and a healthy breakfast! In most cases, when the exams are over, patients don't need to worry about testing for an entire year," Dr. Half notes with satisfaction.

Medical Consultant:



Dr. Elizabeth Half Head, Gl Malignancy Unit, Familial Cancer Syndromes, Institute of Gastroenterology, Rambam Healthcare Campus



Global Medicine



"Code Orange" Preparation in Toronto

A team of trauma medicine experts from Rambam led a three-day "Code-Orange" workshop to help Toronto's Hospital for Sick Kids prepare a plan for mass casualty situations. Rambam's Deputy Director, Dr. Michael Halberthal, along with Gila Hyams, Director of Nursing and Dr. Hany Bahouth Director of the Trauma Unit. conducted the workshop on behalf of Rambam's Teaching Center for Trauma Emergency and Mass Casualty Situations. The special educational program was aimed at all professionals involved in the organization and treatment of mass casualty incidents: pre-hospital forces, hospital staff, physicians, nurses, and administrators.



From Haifa to Tblisi

A humanitarian medical team, led by Dr. Ran Steinberg, Director of Rambam's Department of Pediatric Surgery, made its bi-annual visit to the Georgia capital to operate on children with severe health problems and share their experience with local medical staff. The collaboration between Rambam and the University Pediatric Hospital in Tblisi, now in its fifth year, has been enthusiastically supported by the President of Georgia, and is a source of pride and satisfaction for the Rambam staff. Dr. Steinberg observes, "Our ties with the Georgian staff remain close throughout the year...I am moved by the encounter each time."



Professional Support for the Gaza Strip

Dr. lyad Khamaisy, Director of Rambam's Advanced Endoscopy Unit, recently returned from a medical support trip to the Gaza Strip organized by the Physicians for Human Rights. During the 24-hour stay, Dr. Khamaisy not only assisted local physicians in treating their most severe cases, but also provided them with guidance and professional updates. The medical infrastructure in the Gaza Strip is extremely compromised and Dr. Khamaisy reports that the Gaza physicians, frustrated with the lack of resources available to them, welcome the outside assistance. Dr. Khamaisy joins these volunteer delegations 3-4 times a year, with Rambam's encouragement and support.

INVITATION

You are cordially invited to **RAMBAM's 80th** ANNIVERSARY **GALA 2018**



Tuesday | May 29, 2018 | 7:30 PM The Historic Stone Building Rambam HCC | 8 Ha'aliya Street Bat Galim | Haifa

Discover Rambam's achievements through the lens of history, laying the groundwork for an exciting tomorrow.

- Rambam's impact on a young Israel
- Rambam's contribution to Israel as a start-up nation
- Rambam's role in war and peace
- A gala evening celebrating Rambam's exciting vision for tomorrow and honoring the 2018 Rambam Award recipients

History of Rambam Light & Sound Show The 2018 Rambam Award Ceremony Honoring:

- Professor Joseph Itskouitz-Eldor, Israel
- Professor Elizabeth Nabel, USA
- Mr. Adam O. Emmerich, USA

For their unparalleled contributions to medicine, science, technology, leadership, and humanity.

For RSVP: Gala@rambam.health.gov.il

Eighty years of Excellence, Innovation and Humanity



Donor Spotlight

Jonathan and Edna Sohnis Alan and Tatyana Forman

A Shared Vision: Israeli Research and Care for a Better World



L-R: Alan and Tatyana Forman, Prof. Rafi Beyar, Edna and Jonathan Sohnis and AFORAM Executive Board President, Adam Emmerich



The Forman Family at the appreciation ceremony in their honor at Ruth Rappaport Children's Hospital

A s a young man, Jonathan Sohnis left the US to study at the Technion-Israel Institute of Technology's Faculty of Electrical Engineering. Sohnis' strong childhood connections to Israel were only reinforced as he studied in one of the Technion's most rigorous programs. Leveraging the knowledge gained during his studies, Sohnis and his partner Alan Forman established a thriving electronics business.

As partners in business and philanthropy, individually and together with their families, Mr. Sohnis and Mr. Forman have been extraordinarily generous in their support to Rambam's healthcare and research programs. Along with Rambam and the Technion, beneficiaries of their compassionate giving include a wide range of charitable healthcare and education initiatives, benefiting children and adults in their home communities in New York, in Israel, and around the world.

The Formans and Sohnis' embrace life and fully express their capacity to empower individuals to overcome life's challenges. They are proud enablers of cutting edge medical research at Rambam and the Technion to advance scientific knowledge and alleviate suffering worldwide.

Among their many gifts to Rambam, the Forman Family established the The Alan and Tatyana Forman and Family Immunology Genetic Research Labratory, as well as the Forman Family Science Museum for the enjoyment of young patients at Ruth Rappaport Children's Hospital. The Sohnis Family has supported, among others, research grants for Rambam physicians to develop promising initiatives. Together, the families support Rambam's Institute of Cardiology Research and Development, and their recent gift, the new Forman-Sohnis Center for Clinical Cancer Research at the Joseph Fishman Oncology Center, where transformative research will potentially improve the lives of cancer patients everywhere.

In recognition of their outstanding vision, generosity and partnership, the Formans and Sohnis' were guests of honor at the 2016 AFORAM Gala, and welcomed by Rambam into the Maimonides Friendship Circle.

For the Love of Ruth

In beloved memory of Ruth Rappaport (1924-2018)





Ruth Rappaport with family and friends at her 93rd birthday party.

Rambam mourns the recent passing of Ruth Rappaport (z["]I), beloved friend and champion of health and wellbeing for the children of Northern Israel.

Born in Berlin, Ruth and her family escaped Nazi Germany and immigrated to Israel, where she met her future husband Bruce. The couple had four daughters and eventually moved from Haifa to Geneva, Switzerland, but their home city was always close to their hearts. Over the years, with vision and dedication, Ruth and Bruce Rappaport created the institutional foundations that positioned Haifa as an international center for medical care, education, art and research.

In 2006, when missiles rained down on Haifa, the Rappaports called Prof. Rafi Beyar with an idea for how to support the city and the children of the region in a bold and impactful way. The Ruth Rappaport Children's Hospital they envisioned in the new West Campus would set a new standard for compassionate and child-centered pediatric care throughout the entire country.

Today, thousands of children and their families gratefully acknowledge the quality of care they receive at Ruth Rappaport Children's Hospital – a facility where no effort or thought has been spared to ensure an optimal healing experience. As a loving mother, grandmother and greatgrandmother, Ruth Rappaport understood the concern that surrounds a sick child. And she was determined to do everything possible to ease and comfort those in need.

Supporter of the arts and higher education in Haifa, Ruth Rappaport received the 2010 Rambam Award for her magnanimous contributions towards improving human health and alleviating suffering, in Israel and around the world.

Snapshots August 2017- October 2017



L-R: Rick Hirschhaut, Eti Ganin, Ellen Pomerantz, Prof. Ora Israel, Bruce and Karen Altchouler

Over 80 guests assembled at Temple Tifereth Israel in Cleveland, Ohio to hear Prof. Ora Israel, Director of Nuclear Medicine at Rambam, share her insights on what makes Rambam so unique. Eti Ganin, a temple member, and Bruce Altchouler, who made Aliyah from Cleveland, also shared their personal connections to Rambam. Rick S. Hirschhaut, National Executive Director of the American Friends of Rambam (AFORAM), welcomed the audience and answered guestions.

August 2017



L-R: Dr. Zvi Ben Ishay, Rambam Deputy Director Emeritus, Mark Spencer, Dr. Esty Golan, Managing Director of International Relations

Rambam was honored to welcome Mark Spencer, son of Irma and Aaron Spencer, AFORAM Board Members, during his first ever visit to the healthcare campus. The Spencer Family, longtime and beloved friends of Rambam, are best known for the auditorium at Rambam that bears their late daughter Cheryl's name, and their scholarship program which has enabled hundreds of nurses to continue their education. Mr. Spencer had an emotional meeting with grateful scholarship recipients and heard their stories.

September 2017



Ambassador Dennis Ross and the Washington Institute delegation with Prof. Karl Skorecki and the International Relations team

The Honorable Ambassador Dennis Ross and a delegation from the Washington Institute for Near East Policy came to Rambam to learn about Rambam's vital role as a regional asset for health, innovation, security and peace-building, including the humanitarian treatment provided at Rambam to Syrian war casualties, and to Palestinian children at The Joan & Sanford Weill Division of Pediatric Hematology-Oncology and Bone Marrow Transplantation. They also toured the Sammy Ofer Fortified Underground Emergency Hospital as well as the Ruth Rappaport Children's Hospital.



Performers Dorit Reuveni and Yankale Mendel at the event

The new Australian Friends of Rambam, established and headed by Vered Harel of Melbourne, was inaugurated with a lively musical evening featuring Israeli media personalities Dorit Reuveni and Yankele Mendel. Some 90 audience members enjoyed a film about Rambam and learned of the hospital and its profound regional and global impact.

October 2017

October 2017



Rambam International Relations

Snapshots October 2017- December 2017



L-R: Richard Hirschhaut, Sari Arshadnia, Dr. Tomer Charas, Mersedeh and Ramin Mesriani, and Yossef Sagi

Mersedeh and Ramin Mesriani graciously hosted a beautiful outdoor event at their Pacific Palisades, California home, to raise funds towards the completion of the Radiation Therapy Floor of the Joseph Fishman Oncology Center. Personal reflections from the Mesriani family, Rambam oncologist Dr. Tomer Charas, and Joseph Fishman's grandson, Yossef Sagi, stirred the hearts of more than 150 guests to take bold action and give generously to help patients with cancer.

October 2017



Myra and Joel York in the garden plot planted in their honor in front of the Joseph Fishman Oncology Center.

Joel and Myra York of Toronto, Canada, generous donors to the Joseph Fishman Oncology Center's Linear Accelerator floor, received a warm welcome to Rambam by Prof. Rafi Beyar, Rambam's Director and CEO, Dr. Esty Golan and Dr. Miki Halberthal, Deputy Director. The honored guests also received a VIP tour of the Sammy Ofer Fortified Underground Hospital and the Radiation Therapy Floor at the Joseph Fishman Oncology Center.

October 2017



Australian delegation hosted by Prof. Gil Bolotin, Dr. Esty Golan, Abigail Zohar and Miriam Glueck

Dr. Naomi Jacobs, Director of Convention Abroad, brought 25 physicians from Australia to Rambam as part of their annual medical conference. The focus of the delegation's visit was to observe how medical systems work in different countries. The doctors were particularly interested in learning about management of common medical conditions and mass casualty preparedness.

October 2017



L-R: Iris Feingold, Tomer Feingold, Gila Feingold, Dr. Esty Golan, Prof. Amir Kugelman

Haifa resident Tomer Feingold, his wife, Iris, and his mother, Gila were the proud guests of honor at an inauguration ceremony for the new Shoshana Silber Parental Adaptation Suite in the Department of Neonatology and Neonatal Intensive Care. The new facility, established in honor of Tomer's grandmother, will provide a supportive and secure environment where new parents can bond with their infants.

October 2017



Erlanger Health Systems team with Rambam hosts

Senior representatives of US-based Erlanger Health Systems visited Rambam to exchange professional knowledge and investigate potential collaborations. Erlanger Senior VP Joe Winick and Dr. Blaise Baxter, Chief of Radiology, received an overview of Rambam from Prof. Rafi Beyar, and met with Dr. Eitan Abergel to share their experiences with stroke treatment at their respective institutions. The guests also toured the Sammy Ofer Fortified Underground Emergency Hospital and met with Rambam physicians.

November 2017



Mission delegates headed by Larry Wolfe, with Prof. Karl Skorecki, Dr. Esty Golan, Prof. Lior Gepstein

Larry Wolfe and a mission from the Jewish Federation of Metropolitan Detroit were welcomed to Rambam by Prof. Karl Skorecki, Medical and R&D Director, Prof. Lior Gepstein, Director of Cardiology, discussed his work in cardiac electrophysiology and regenerative medicine, after which Dr. Esty Golan led a tour of the D. Dan and Betty Kahn Foundation Pediatric Pulmonary Unit, Joseph Fishman Oncology Center and Sammy Ofer Fortified Underground Emergency Hospital.

November 2017



International Healthcare Executive Officials Educational Mission to Israel with Abigail Zohar

A delegation of 21 health executives from 15 countries visited Rambam as part of their studies in healthcare systems, and were hosted by Deputy Director Emeritus, Prof. Amos Etzioni. "Rambam is exemplary for its state of the art technologies and ...underground hospital, ... I admire the hospital's endeavors for making safety and security their number one goal for all their patients" said Dr. John Ndukwe, ER Medical Officer from Midland Hospital in South Africa.

November 2017



L-R Dr. Nadav Ben Haim, Inbar Shahaf, Judith Klebanow, Adil Adi, Prof Rafi Beyar, Dr. Esty Golan, Shirley Erulkar, Or Shahaf, Lior Teitelbaum

An avid supporter of Israeli technological innovation, Adil Adi came to Rambam from Texas to see the cutting edge research in the fields of cancer, non-invasive surgery using MRI-guided focused ultrasound, cardiac electrophysiology and regenerative medicine. After a visit to the MindUp Digital Medicine Incubator, Mr. Adi and Judith Klebanow finished their visit with a Hannukah candle-lighting ceremony with Prof. Rafi Beyar, Dr. Esty Golan, Or Shahaf CEO of Haifa Economic Corporation and Mind Up staff.

December 2017



Snapshots December 2017-February 2018



L-R: Saranne Rothberg, Marc Weill, Dr. Esty Golan and Prof. Myriam Ben Arush

Rambam was honored to host Marc Weill and Saranne Rothberg during their recent visit to Israel. Prof. Myriam Ben Arush, Director of the Ruth Rappaport Children's Hospital, and Dr. Esty Golan, led Mr. Weill and Ms. Rothberg on a tour of the Joan and Sanford Weill Pediatric Hematology Oncology and Bone Marrow Transplantation Division, established through a gift from his parents. They also met Dr. Mony Benifla, Director of the The Zukier Family Comprehensive Epilepsy Center of Excellence.

December 2017



L-R: Prof. Rafi Beyar, George Feldenkreis, Evan Hanono and Dr. Esty Golan

George Feldenkreis of Miami, Florida and his grandson, Evan Hanono received a warm welcome from Prof. Rafi Beyar and Dr. Esty Golan during their recent visit. Mr. Feldenkreis, recipient of the 2015 Rambam Award and a member of AFORAM's Board of Directors, also met with Prof. Oral Israel, Director of Nuclear Medicine, and toured sites around the Rambam campus including the gift made by his family, the Eva Feldenkreis Feig Ovarian Cancer Center.

December 2017



L-R: Hagar Lifa, Vered Harel, Dr. Moshe Michaelson and Nurit Naeh

The Australian Friends of Rambam hosted a cocktail function and meeting with Dr. Moshe Michaelson, Head of the Israeli National Committee for Mass Casualty Situations, and former head of Rambam's Trauma Unit and Emergency Department and Nurit Naeh, former Director of Public Relations at Rambam. The event, hosted by Hagar and Avi Liffa, raised awareness for Rambam's international work in the field of trauma, and the opening of the new Australian Friends organization.

January 2018



Inbar Shahaf, Yossi and Anita Goren and their children, and Shirley Erulkar

Yossi Goren, a young high-tech entrepreneur from Haifa, has been swimming in Rambam's swimathons since 2015 to raise funds for research to prevent sudden cardiac death in children and young adults. He was joined by his wife Anita, children Libi, Alma and Dan, his mother Luba Goren and aunt, Victoria Shtern, at a ceremony honoring their gift to Rambam, made in memory of Yossi's grandparents, Baruch and Hanna Shtern.

January 2018



Anoushka Rose and Lady Anita Alexander Passe

Lady Anita Alexander-Passe, Director of the British Friends of Rambam Medical Centre, wrote Harry's Story, a book of poetry and prose inspired by her beloved family, and is donating half the proceeds of its sales towards the purchase of a neonatal incubator and other medical equipment. Lady Alexander-Passe's deep compassion and concern for the welfare of children is reflected in her many gifts to benefit pediatric patients at Rambam.

January 2018



L-R: Michael Renbaum, Emily Goldgram, Ellen Pomerantz, Tsipi Renbaum, Al Goldgram, Roslyn Pomerantz, Sue Baron

The Israel Forum of Broken Sound in Boca Raton, Florida hosted American Friends of Rambam with Dr. Oved Cohen, Deputy Director of the Cardiac Surgery Department of Rambam. The audience listened attentively as Dr. Cohen introduced Rambam, its many innovations, atmosphere of coexistence, security issues and plans for the future. Al Goldgram made the introductions and Michael and Tsipi Renbaum shared heartfelt impressions from their visit to Rambam.

January 2018



Dr. Eyal Fruchter and guests at the Scarsdale event

Dr. Eyal Fruchter, Director of Rambam's Division of Mental Health, spoke of his research on PTSD and suicide prevention, and experiences as Director of Mental Health for the Israel Defense Forces, at an event in Florida hosted by Hadas and Zeev Feig and the Riviera Parliament; and in Scarsdale, NY at the home of Barry Warhit and Dr. Ellen Teplitz, organized by Judge Jeffrey Cohen, for members and friends of the Brandeis Westchester Law Society.

February 2018



L-R Prof. Rafi Beyar, Bill Landa, Don Soffer, Rick Hirschhaut, Billy Joel

Prof. Rafi Beyar, Rambam's CEO and Director, and Rick Hirschhaut, AFORAM's National Executive Director, traveled to Aventura, Florida for the festive opening of AFORAM's new South Florida Chapter. Sue Baron, Southeast Regional Director, organized the event, which attracted a high profile group of community leaders, including Bill Landa, Don Soffer and former Aventura vice mayor Billy Joel.

February 2018



Rambam Honors its Visitors from Around the World



Israel Export and Intl Corporation Intl., China,

Israel July 2017



Dr. Lloyd B. Minor, Dean, Stanford University School of Medicine, USA July 2017



Learning Works Educational Experience, USA July 2017



The Feig Family, USA July 2017



The Crown Foundation, USA July 2017



Amgen, USA August 2017



Israel Experience, Russia August 2017



Washington University and Mr. Vijay Chauhan, BioSTL, St. Louis, USA August 2017



Event at Temple Israel with Rabbi Mike Schultz, USA August 2017



Event at Young Israel of Sharon with Rabbi Mike Schultz, USA August 2017



Event at Shaarei Tefila Synagogue with Rabbi Mike Schultz, USA August 2017

Theatre in Paris, France

September 2017

Event at the French





Appreciation Ceremony in honor of Leichtman Family in Cardiac Surgery Department, Israel September 2017



Mrs. Caroline Bastiaens, Deputy Mayor, Antwerpen, Belgium September 2017



WeLink China, China September 2017



Dr. Craig Granowitz, Amarin Corporation, USA

September 2017



UC Davis Delegation, September 2017



Mr. Michael Mohnblatt, Archie Sherman Foundation, United Kingdom

September 2017



Ivy Branin, USA September 2017



Swiss Healthcare **Delegation**, Switzerland October 2017



USA

Johnson & Johnson Delegation, USA/Israel October 2017



Engles Family, IGT,

October 2017



Paul Pariser, USA

October 2017



David and Sheilla Ganch, Dan and Barrie Galvin, USA October 2017



Australian Medical Delegation, Australia October 2017



EFMI STC 2017 Conference, **European Union** October 2017





Friends of the IDF, USA October 2017



Israel Ministry of Health Ombudsman, Israel October 2017



David Lynch Foundation, United Kingdom/Israel November 201



Healthcare Delegation from, Galilee College, China

November 2017



American Physicians Fellowship, USA November 2017



Singapore Ministry of Health Delegation, Singapore November 2017



Erlanger Healthcare, **Executive Leadership** Delegation, USA



African Healthcare Delegation from Galilee College: Brazil, Burkina Fasso, Canada, Ethiopia, Ghana, Jamaica, Nigeria, Rwanda, Tanzania, Sierra Leone, Zambia, Uganda, United Kingdom, Trinidad & Tobago, Kenya

November 2017



Julie and Gary Appelbaum, Christy and Marty Watkins, USA

November 2017



Pharmacist Convention, Mission Delegation, Italy November 2017

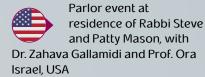


GPLLI-WINGS, University of Tokyo, Japan

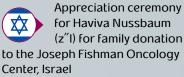
November 2017



Appreciation Ceremony for Chabad for donation of wheelchairs, Israel



November 2017





Mashav Delegation, Cameroon, Ethiopia, Cote d'Ivoire, Kenya, Nigeria, China, India, Philippines, Thailand, Viet Nam, Albania, Belarus, Georgia, Kazakhstan, Turkmenistan, Ukraine, Uzbekistan, Turkey Colombia, Costa Rica, Dominican Republic, El Salvador, Guatemala, Haiti, Panama, Peru, Uruguay, Egypt, Denmark



Delegation from Denmark



Unveiling ceremony of sculpture in memory of Michal Helef (z["]l), Israel



Ceremony for Yael Organization in the Endocrinology Research Center and Diabetes Clinic, Israel

January 2018



SPECIAL EVENTS



Prof. Myriam Ben Arush, Prof. Rafi Beyar, Dr. Esty Golan and Atty. Glazberg with members of his staff at the ceremony.

Supporting Rambam's Pediatric Bone Marrow Transplant Patients

Family and friends came together to celebrate the memory of the late Helga Lula Riner and Ekaterina (Katy) Adriana Shudi, at a ceremony honoring the gift from her estate to establish the Helga Lula Riner and Ekaterina (Katy) Adriana Shudi Bone Marrow Transplant Unit in The Joan & Sanford Weill Division of Pediatric Hematology-Oncology. Attorney Efraim Glazberg, representing the estate, attended the ceremony along with lawyers from his firm, and spoke of Helga and Ekaterina and their life and legacy.



Liora Govrin, Zehava Laniado , Attorney Lisa Douek, Ronny Douek, Paul Douek, Prof. Gil Bar Sela, Dr. Esty Golan and Dr. Avi Weissman

A Legacy of Oncology Care

Guests at a ceremony of appreciation honored the memory of Dr. Maria Rossi Ascoli (z"l), an Italian Jewish physician, and the gift to establish the Dr. Maria Rossi Ascoli **Oncology Emergency Department** in the Joseph Fishman Oncology Center. Attorney Lisa Douek and her sons, Ronny and Paul, family friends of the late Dr. Ascoli, and Liora Govrin, Deputy Director of the Administrator General's Department of Inheritance of Estates, as well as Rambam's Deputy Director, Dr Avi Weissman, and Prof. Gil Bar Sela, **Deputy Director of Joseph Fishman** Oncology Center, were among the honored guests.

The Goldhar Family and the new Diabetes and Obesity Center of Excellence



E ffi and Eli Goldhar, longtime friends and generous supporters of Rambam, were honored for their gift to establish the Diabetes and Obesity Center of Excellence, directed by Prof. Naim Shehadeh, Director of the Endocrinology, Diabetes, and Metabolism Institute, and President of the Israeli Diabetes Association. In attendance were Eli's relatives, Malka and Harry Rosenbaum from Canada, who were in Israel to celebrate their granddaughter's bat mitzvah, along other friends and family.

At the ceremony, Prof. Shehadeh presented several diabetes studies, including a new infant formula, protective glasses, and a call center for patients of the center.

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ΟΜ F R E HEA R

Join hundreds of swimmers from Israel and around the world in the Third International Swim From The Heart meet in Haifa, Israel on Friday, May 25, 2018.

Swim From The Heart was established to raise awareness and critical research funds to predict and prevent sudden cardiac death (SCD) in children and young adults—a major cause of natural death worldwide. Inspired by open-water swimmers in Northern California and Israel, participants will give of their strength, passion, and resources to swim in one of four heats in the Haifa Bay—all in support of SCD research at Rambam.

DONATE FROM YOUR HEART TO PREVENT SUDDEN CARDIAC DEATH

Contact us at: Summit@rambam.health.gov.il



RAMBAM Health Care Campus