

SHEBA PULSE

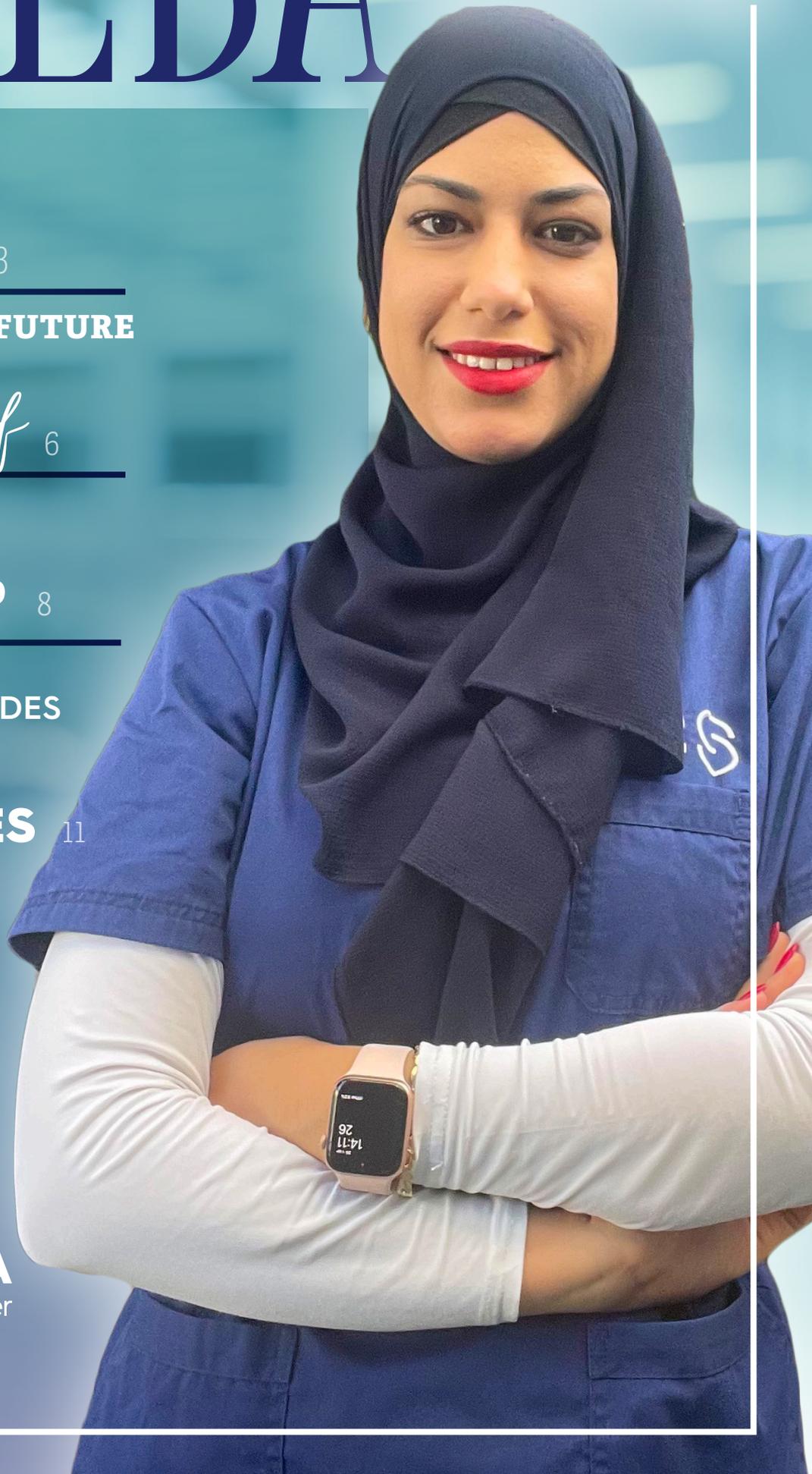
JANUARY 2022

WHAT IS
SHEBA GLOBAL? 3

IMPACTING THE FUTURE
OF HEALTHCARE
in the Gulf 6

WHAT MAKES A
SMART
HOSPITAL? 8

HUMANITARIAN
OUTREACH PROVIDES
HOPE
WITHOUT
BOUNDARIES 11



letter FROM THE EDITOR

SHEBA PULSE

EDITORS:

YOEL HAR-EVEN

*Director, Sheba Global
Yoel.Hareven@sheba.health.gov.il*

STEVE WALZ

*Sheba Global Spokesperson
& Editor of Sheba Pulse
Steve.Walz@sheba.health.gov.il*

MANAGING EDITOR:

AVIVA SAPIR

*FINN Partners
aviva.sapir@finnpartners.com*

GRAPHIC DESIGN:

STAIMANMEDIA.COM

Dear Friends and Colleagues,

So much has transpired since we published the last edition of Sheba Pulse!

First and foremost, this edition is being published under the auspices of Sheba Global, the newest division within the bustling medical center.

What is Sheba Global?

Sheba Global is the hospital's revamped international business and marketing division, which since its reconfiguration this past summer, has expanded by leaps and bounds. The Sheba Global business umbrella also comprises MSR, the Israel Center for Medical Simulation, Education and Training, Global Patient Services (formerly known as Medical Tourism) and the Israel Center for Disaster Medicine and Humanitarian Response.

Under the leadership of Yoel Har-Even, the Director of Sheba Global and Keren Yaniv, who helms Sheba's business outreach and negotiations, the new division has already forged various healthcare agreements with a growing number of nations around the globe, starting with the Asian, African and Arabian Gulf regions.

Sheba Director General, Professor Yitshak Kreiss and Yoel Har-Even have personally changed the dynamics of healthcare in the United Arab Emirates and Bahrain in the aftermath of the Abraham Accords, signing extensive agreements with government health authorities, hospitals and healthcare systems, as well as private ventures.

These burgeoning agreements, which will likely extend to Morocco and other Middle East and North African and Arabian Gulf nations in 2022, have already created a global impact across the worldwide media. Sheba's bridge-building efforts in the Arab world underscore its Hope Without Boundaries patient care agenda on the home front.

As Sheba is a microcosm of Israeli society, doctors and nurses from all sectors have worked side-by-side for decades, a true manifestation of co-existence. Senior nurse, Lina Ahmad (who appears on the cover of this magazine), risked life and limb as she treated the first-ever corona patients at Sheba before vaccines were available, and continues to treat patients from all walks of life in the emergency room and Internal Medicine IX department, with heart and soul on a daily basis.

Sheba Global also serves as the international arm of Friends of Sheba Medical Center branches around the world, highlighted by two new additions since last year in Australia and Latin America.

The Friends of Sheba branches and their growing member bases represent the core of our philanthropic and investment outreach efforts. The difference between Sheba and the majority of other hospitals in Israel and around the world is that we are enabling people of all ages to not only make philanthropic donations, but to also actually invest in our various humanitarian missions and business projects, such as our ARC innovation center start-up ecosystem.

Inside this newest edition of Sheba Pulse, you will read about many of our achievements during the past year, as well as several heart-warming stories, which accentuate the essence of medical innovation. We hope you enjoy reading the magazine and passing it on to friends.

SHEBA *Global*: MEDICAL EDUCATION, TRAINING, SIMULATION & PROJECT CONSULTATION

Sheba's Global commitment is to share knowledge and experience with healthcare professionals and institutions worldwide



Doctors from Kazakhstan observing in an operating room at Sheba Medical Center, as part of medical training and education

SHEBA GLOBAL – TRAINING, EDUCATION & SIMULATION

Sheba Global undertakes a wide range of training and educational programs in all fields of medicine and healthcare and for all healthcare professionals. These programs are conducted at Sheba, on-site in the client country's healthcare facility, which includes 'Visiting Experts,' or digitally, and are designed specifically to the needs and requirements of the client:

Clinical Training

- ▶ Clinical training programs are designed for physicians, nurses, para-medical specialties and healthcare professionals in all medical fields. The programs are based on participation in the work of the clinical departments including clinical activities such as assessment of patients, pre and post-surgical care, bedside observations, ward round discussions, multidisciplinary meetings, simulations and theoretical lectures.

Enrichment Programs

- ▶ Enrichment training programs are designed for physicians and medical professionals who want to upgrade their existing capacities or gain new skills in order to meet the medical needs of their healthcare service and community.
- ▶ These training courses are available in a wide range of subjects, including medical innovation and telemedicine, emergency preparedness and disaster medicine, as well as research management, medical procurement, infection prevention and more.

Healthcare Administration & Management

- ▶ Health care management training programs combine medical knowledge with management skills for directors of medical centers, executives from the health care industry, administrators and health care professionals.

MSR – Center for Medical Simulation

- ▶ The Israeli Center for Medical Simulation (MSR) is a global leader in simulation based medical education that has revolutionized advanced patient safety and quality care. By pioneering innovative changes within the safety culture of healthcare, MSR-Azrieli improves the preparedness of health professionals to perform challenging clinical and humanistic duties, leading to a safer, more ethical, patient-centered medical environment.

- ▶ MSR-Azrieli employs a broad spectrum of medical simulation technologies including virtual reality, role-playing actors, advanced task trainers, and computerized mannequins. These are supported by sophisticated audiovisual equipment and debriefing software facilitating systematic and constructive feedback to trainees.

SHEBA GLOBAL – PROJECTS

Sheba Global shares Sheba's expertise and experience with healthcare professionals and institutions worldwide. Experienced professionals in various disciplines, including physicians, nurses, economists, architects, engineers, communication professionals, IT experts and project managers lead Sheba's global project management, consultation and advisory services. Amongst a wide range of services undertaken:

Healthcare Systems

- ▶ Evaluation and improvement of health care systems and services at national, provincial and local levels, along with planning of national healthcare programs.

Establishment of Healthcare Facilities

- ▶ Feasibility studies for healthcare facilities.
- ▶ Consultation services for planning, development, equipping and staffing of healthcare facilities.

Hospital Management

- ▶ Support services for the management of hospitals and other healthcare facilities.
- ▶ Mentoring and on-going consultations for the administrative and management staff of new facilities via on/off-line transfer of relevant data, accreditation processes and progress monitoring, as well as active participation through long-distance meetings and periodic site visits.

For More Information: Sheba.international@sheba.health.gov.il

2021: THE TOP 10 ACHIEVEMENTS

The true number of Sheba's achievements, which occur on a weekly basis, would probably consume all of the space in this magazine. Narrowing the list down to ten was a herculean task, so we focused on those achievements which garnered the most headlines around the world.

1. NEWSWEEK RECOGNITION

For an unprecedented third consecutive year, Sheba was rated as a top-10 hospital on Newsweek magazine's renowned World's Best Hospitals rankings. No other hospital in the Middle East has garnered this type of recognition. In addition, Newsweek cited Sheba as a World's Best Specialized Hospital and World's Best Smart Hospital in 2021.



2. CORONA FIRSTS

As the pandemic continues to challenge hospitals all over the globe, Sheba has been able to lead the world in orchestrating a myriad of COVID-19 initiatives. During the past year, Sheba was first in the world to vaccinate immunocompromised citizens with the 3rd Pfizer vaccine, followed by being first in the world to provide the 3rd Pfizer booster vaccine to medical personnel and citizens alike. In addition, Prime Minister Naftali Bennett approved Prof. Gili Regev-Yochay's "Green Classroom" initiative, which has played a vital role in keeping elementary schools and kindergartens open even during a coronavirus wave.

3. ABRAHAM ACCORDS 1

Over the past year, Sheba accelerated its activities across the United Arab Emirates with Sheba physicians offering on-site and virtual services to a variety of hospitals in Dubai and Abu Dhabi, as well as a first-ever visit of a senior Israeli doctor to Ras al-Khaimah, where our top rehabilitation specialist Prof. Israel Dudkiewicz tended to patients and provided training to doctors in the Northern Emirate. Sheba was also involved in a first ever three-way kidney transplant between Jewish-Israeli and Moslem-Arab donors and patients. Donor kidneys were shipped between Abu Dhabi and Tel Aviv via private jet.

4. ABRAHAM ACCORDS 2

Yoel Har-Even, Director of Sheba Global, participated in an inspiring ceremony in Manama with Israeli Foreign Minister, Yair Lapid, where Sheba signed an agreement with Salmaniya and the King Hamad University Hospital, the largest government hospitals in Bahrain. Soon after, Sheba signed agreements with other government and private hospitals to provide multiple services, from onsite training and patient care to game-changing medical innovation. Sheba has rapidly become the dominant Israeli healthcare force in the Gulf region.

Yoel Har-Even (left) signs agreements in Bahrain



5. SHEBA BEYOND

One of the tools that Sheba is using to accelerate high-quality medical care to the Gulf and the world at large is telemedicine. Sheba's virtual hospital platform, Sheba BEYOND, offers cutting-edge services that integrate different start-up technologies, designed for each hospital or healthcare system and their patients.

6. ARC IN THE UNITED STATES

Sheba's ARC is a start-up ecosystem concept that aims to Accelerate, Redesign and Collaborate with partners around the world in order to usher in the global digital healthcare revolution. In 2021, ARC was exported to two of America's largest metropolitan regions in Chicago, Illinois and at the Liberty Science Center in Jersey City, New Jersey. In 2023, ARC is expected to expand its reach across the USA, UK, the Gulf region and Australia.



Prof. Eyal Zimlichman, Chief Innovation Officer & Founder of ARC (left), signs agreement to launch ARC HealthSpace 2030 in New Jersey

7. SAVING SAIDIAN

When traumatized Israel Defense Forces veteran Itzik Saidian self-immolated as a form of protest last spring, he arrived at Sheba in grave condition, suffering from burns on over 90% of his body. No one gave him a chance surviving. However, Prof. Josef Haik and his elite National Burn Center team did everything in their power to keep him alive. Prof. Haik performed countless skin grafts on Saidian, utilizing the hospital's state-of-the-art skin bank, where healthy skin cells from Saidian's body were taken and grown into larger pieces in the skin bank laboratory. These were then grafted onto his body. Despite impossible odds, Saidian is slowly making a miraculous recovery!



Skin grown in Sheba's state-of-the-art skin bank used to save lives

8. HUMANITARIAN OUTREACH

The hospital's Israel Center for Disaster Medicine and Humanitarian Response team led by Prof. Elhanan Bar-On engaged in several important missions around the globe during the past year. A delegation of highly trained corona doctors, nurses and support staff were dispatched to Uruguay, where they helped the Latin American nation combat the pandemic. Prof. Bar-On also flew to the Greek island of Lesbos to assist in treating refugees who had lost everything and were in urgent need of medical assistance. Medical supplies and equipment were also donated to pandemic-stricken Nepal.

9. SHEBA IN SPACE

Sheba's next space research initiative is already underway and will culminate in the 'Rakia' space mission – a collaboration with The Ramon Foundation and the Israel Space Agency to send the second Israeli ever, Eytan Stibbe, into space as part of the first private mission to the International Space Station (ISS). The mission, set to blast off in early 2022, will feature a variety of experiments from ARC's Space Lab hub, aimed at promoting medical innovation.

10. BRILIFE VACCINE

Sheba was the first hospital to begin clinical trials with the BriLife COVID-19 vaccine, developed by the Israel Institute for Biological Research. During 2021, the clinical research department also played a vital role in the Phase 2b trials on dozens of volunteers. Initial results from the trials indicate that the Israeli vaccine shows true promise against a phalanx of coronavirus variants and Sheba is poised to partake in the pivotal Phase 3 trials at the end of 2021. Is the home-grown vaccine the antidote to the global pandemic?

While this top-10 list is only a glimpse into the amazing accomplishments of Sheba, it's clear to see that as a powerhouse of medical care, research and innovation, Sheba is truly creating a global impact.

HOW SHEBA MEDICAL CENTER IS IMPACTING THE *Future of Healthcare* IN THE ARABIAN GULF REGION

By Steve K. Walz

Over a year before the Abraham Accords were formally signed at the White House in September 2020, Professor Yitshak Kreiss, the Director General of Israel's Sheba Medical Center, the largest facility of its kind in the Middle East, was already planting thds of regional cooperation at the Peace to Prosperity Conference in Bahrain.

Those initial contacts with business and healthcare executives from both the UAE (United Arab Emirates) and Bahrain have resulted in flourishing relationships with government health authorities, healthcare systems, hospitals and investment companies through Sheba Global, the medical center's fast-growing international business and marketing division, under the leadership of Yoel Har-Even.

Within the UAE, Sheba Medical Center is tending to the needs of members of the armed forces who suffer from maladies associated with high cholesterol and diabetes, women with obstetrical issues, as well as short- and long-

term rehabilitation for men, women and children. These treatments are anchored by Sheba Medical Center's cutting-edge Sheba Beyond telemedicine program in coordination with a local healthcare system, as well as Medcare Women's Hospital in Dubai.

In addition, Sheba is administering lifesaving onsite treatments to critically ill patients from the Emirates who have been flown to the hospital as part of Sheba's growing Global Patient Services referral program in the region.

Sheba also made a huge impact within Ras al-Khaimah, one of the UAE's smallest emirates (there are seven emirates within the UAE), where Prof. Israel Dudkiewicz, head of Sheba's orthopedic rehabilitation program, trained local doctors and treated patients.

In the neighboring Kingdom of Bahrain, Sheba is engaged in providing a myriad of services to the nation's two largest hospitals, Salmaniya and King Hamad Medical Centers, as well as a private



Prof. Yitshak Kreiss, Director General of Sheba Medical Center discusses healthcare cooperation with HE Abdulla Bin Mohamed Bin Butti Al Hamed, Chairman of Department of Health in Abu Dhabi



Prof. Israel Dudkiewicz in Ras al-Khaimah

“Healthcare can create both economic growth and become an engine of peace.”

Prof Yitshak Kreiss,
Director General of Sheba Medical Center

medical center. Sheba is also initiating a medical innovation program in collaboration with the UK's Ashridge University, the first of its kind within the burgeoning kingdom.

In 2022, Sheba intends to expand its relationship with both the UAE and Bahrain by initiating an exchange of doctors for onsite education, training and patient care, as well as engaging in mutually beneficial research projects and building start-up ecosystems within the framework of Sheba's ARC innovation program.

These expanding alliances accentuate Professor Kreiss' overall vision for the region.

"We devised the Prosperity Through Healthcare initiative to change the future of the Middle East," said Professor Kreiss. "Once there was human interaction, all the barriers between us came down. Healthcare is the most powerful engine of growth in life. Healthcare can create both economic growth and become an engine of peace. The highest level of friendship is achieved

by working side by side in a hospital to save lives and I am excited to see these friendships and partnerships grow."

"We are renowned around the globe as a World's top-10 Best Hospitals by Newsweek magazine for three consecutive years. No other Israeli hospital or any medical facility in the Middle East has garnered such accolades and there are several reasons for this," Har-Even explained. "We are world leaders in advanced medical education, training and research. And, we harbor the DNA of the global digital health revolution through our ARC start-up ecosystem. Based on our initial successes with healthcare systems and hospitals, Sheba is working within the Emirates and Bahrain, and actualizing its vision of offering hope without boundaries and fostering true peace between our peoples."

Israeli Ambassador Eitan Na'eh, the Jewish nation's first representative in the UAE, who in late 2021 became the country's first diplomat in Bahrain, has worked in tandem with Sheba to foster these growing relationships in the region.

"Medicine is the pioneer of establishing the good relationship that exists between the two countries. Thank you to Sheba for its sense of adventure in being one of the first Israeli organizations to engage the UAE, Bahrain and the Arabian Gulf, spreading its message of light through medicine, compassion and hope," Ambassador Na'eh maintained.

In 2022, Sheba Global expects to extend its outreach to the Arab world by engaging healthcare systems and hospitals in Morocco.



Yoel Har-Even (left) signs agreements in Bahrain



ARC promotes a startup-friendly environment in which over 60 startups work side by side with clinicians, researchers, data scientists and others to develop innovative solutions to the most pressing clinical challenges. Here are five of ARC's top innovative startups.

AIDOC

Aidoc's solutions analyze medical images immediately after acquisition and notify radiologists directly in their workflows of cases with suspected findings. Aidoc is used by radiologists worldwide, aiding them in maximizing their clinical performance and expediting patient care. Aidoc has six FDA-cleared solutions and has won numerous awards including Time's 50 most genius companies, Forbes 30 under 30 award, CB Insights Most Innovative Digital Health award, and "Best New Radiology Software."

MEDAWARE

MedAware is transforming patient safety through AI-based, real-time decision support for clinicians. The company's solution crowdsources



WHAT MAKES A *smart* HOSPITAL?

DR. EYAL ZIMLICHMAN,

Deputy Director General, Chief Medical Officer and Chief Innovation Officer at Sheba Medical Center

March 2020 marked the start of a new reality. COVID took the world by storm. We were faced with a global public health crisis, and no one knew how to contend with it. Emergency rooms were bursting, as physicians globally worked to find the right treatments, and hospitals struggled to cope.

At Sheba, COVID presented the opportunity to find new approaches for care delivery in a time of crisis. We were able to mobilize quickly and take innovations from theory to practice. In particular, the ARC Innovation Center at Sheba (ARC = Accelerate Redesign Collaborate), established just three years ago, has played a critical role in Sheba's response to COVID and in shaping the future of patient care. Indeed, COVID has enabled us to bring what we know as a 'smart hospital' to life.

This acceleration in the application of smart solutions – innovations based upon connectivity, AI/machine learning and the digital transformation of healthcare – have established Sheba as one of the world's leading smart hospitals. In fact, in June 2021 Sheba was named the world's 13th Best Smart Hospital in a global survey published by Newsweek and Statista. And, among the 250 elite hospitals listed, Sheba was the number one smart hospital in Israel.

This huge achievement highlights the vital role Sheba has played in spurring the global 'smart revolution'. Through ARC, Sheba has been able to accelerate the implementation of smart hospital solutions, ranging from telemedicine platforms to connect patients to their care teams no matter where they are, to remote patient monitoring solutions to ensure the safety of patients from within home care environments. We have only scratched the surface of possibilities for smart hospital solutions, and we are already taking these innovations to the world to improve care delivery on a global scale.

When we hear the term 'smart hospital,' there is a sense of excitement and wonder as we imagine potential technological applications within a hospital environment. The idea of the smart hospital has garnered much popularity in recent years, but what really is a smart hospital? What will it look like? And what are the solutions driving the smart hospital revolution today and tomorrow? With these questions in mind, I'd like to delve deeper into what actually constitutes a smart hospital.

“Sheba has been able to accelerate the implementation of smart hospital solutions”

AUTOMATION AND AI

In a smart hospital, all processes that do not require human involvement are automated. At the very core of this automation is the use of smart tools based upon artificial intelligence (AI) and machine learning (ML). AI and ML can help clinicians make data-driven decisions quickly, helping to improve the efficiency and quality of care, and ultimately, lead to better patient outcomes – all while reducing cost and waste. Whether reviewing an MRI or lab results or prescribing a new medication, AI-based solutions in smart hospitals help clinicians make better decisions, illuminate blind spots in clinical decision making, and prevent potential errors that can lead to patient harm.

Sheba is one of the only hospitals in the world to have completely digitized its pathology department. We rarely have a need for microscopes anymore, as the AI and computer vision applications that we are developing only require computer screens to read the pathology slides. Through these AI applications, we will be able to gather new insights which were unattainable through the traditional method of reading slides through a microscope in a lab.

Using our AI-driven approach to

pathology, we can now also merge our pathology department headed by Prof. Iris Barshack and our radiology department headed by Prof. Eli Konen, to streamline our diagnostic department. Furthermore, we are able to gather and analyze vast amounts of data from pathology and radiology to enhance our understanding of diagnostics and disease through additional AI algorithms that can identify patterns in data and provide further insights to enhance our understanding and clinical decision making.

Another shining example of the application of an AI solution here at Sheba is Dr. Dina Orkin, director of Sheba’s operating rooms, and Professor Avi Nissan, director of Sheba’s Laboratory of Surgical Oncology. This pair is spearheading Sheba’s innovation in surgery, working on the world’s first AI solution to enable surgeons to make better decisions and improve surgical outcomes.

Within every Sheba department utilizing AI applications, from AI colonoscopy to autonomous navigation technology, Sheba is leading the way as the hospital of the future. But there is still more progress to be made.

physician practice to identify and prevent medication-based errors, opioid dependency, evolving adverse drug events and contraindications and other medication-related risks. MedAware improves patient safety in inpatient and outpatient settings and significantly reduces avoidable risks and costs each day.

CLEW MEDICAL

CLEW Medical provides a real-time artificial intelligence analytics platform designed to help providers make better informed clinical decisions by predicting life-threatening complications across various medical care settings. CLEW’s goal is to provide solutions that improve outcomes and safety, streamline patient care, and efficiently handle regulations and penalties, to lower the cost of care.

MILAGRO AI

MilagroAI enables hospitals and health systems to unlock the true potential of their EMR systems in order to save lives and increase efficiency. The MilagroAI real-time data platform fully automates the currently manual and very costly process of EMR data preparation and clinical data understanding, enabling hospitals and health systems to develop new decision support solutions in weeks instead of the 12-18-month market standard.

SEAMLESS VISION

Seamless Vision is developing the next generation of multipurpose autonomous micromobility solutions, transforming logistics management in the healthcare world with AI and autonomous navigation technology. The technology enables robotic platforms to navigate autonomously in indoor and outdoor environments, and maneuver safely in human dense environments.



CONTROL TOWER TO OPTIMIZE PATIENT FLOWS AND LOGISTICS

Not satisfied with our current position, we are always working hard to find new ways to propel Sheba to be a completely smart hospital. To achieve this, ARC has launched the 'Control Tower' project, building a central location to manage all the clinical needs of patients, optimizing patient flows as well as logistics.

While airports have a control tower to manage a huge amount of air traffic, hospitals are currently lacking a similar solution to manage the flow of the thousands of patients who go through its doors every day. Hospitals can also be extremely inefficient with both patients and doctors wasting time waiting for appointments and operating rooms. By introducing a control tower,

hospitals can become well-oiled machines of efficiency, leading to

more efficient and patient-centric care, and increasing hospitals' capacities to serve.

The control tower ensures that each patient is in the right department at the right time, and in the case of any change in condition, medical staff will be alerted to move the patient to the most relevant department. Additionally, the control tower not only looks at how the patient is clinically, but at critical logistical issues which impact patient flow. For example, if a patient needs to be moved to a bed in a different department, the control tower will not only know that there is a vacant bed, but when it has been cleaned and is ready to accept a new patient.

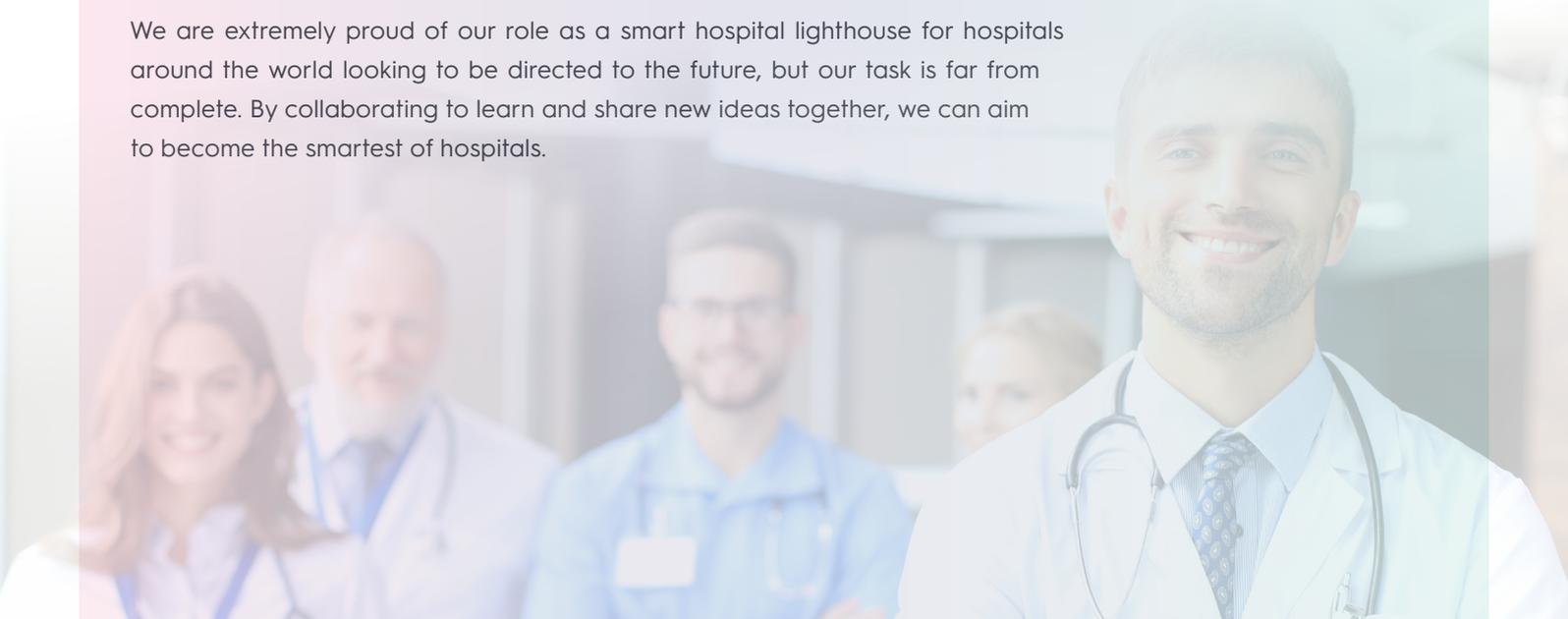
I predict that in ten years' time, hospital control towers will be as commonplace and crucial as Electronic Health Records.

SHEBA AS A SMART HOSPITAL LIGHTHOUSE

Sheba doesn't just lead the world in implementing smart technologies, but also in creating the vision of how a smart hospital should look. This is why we started the Future of Health (FOH) initiative, a proactive community of senior leaders from over 30 leading health organizations around the world, including Stanford, Johns Hopkins and Thomas Jefferson. Through the shared outlook of its members and the power of their collective professional wisdom, we intend to influence, transform, and redesign the vision of the future of health.

In addition to the 20 hospitals around the world in our ARC networks, including Mayo Clinic and Cedars-Sinai Medical Center, we have hospitals from every continent across the globe approaching us to learn about the new smart technologies we have implemented.

We are extremely proud of our role as a smart hospital lighthouse for hospitals around the world looking to be directed to the future, but our task is far from complete. By collaborating to learn and share new ideas together, we can aim to become the smartest of hospitals.





Hope Without Boundaries:

SHEBA'S ISRAEL CENTER FOR DISASTER MEDICINE AND HUMANITARIAN RESPONSE PROVIDES MEDICAL CARE TO **ANYONE, ANYWHERE**

When disaster strikes, no matter where in the world, Sheba is prepared to answer the call. When there was a cholera outbreak in Zambia in 2018, Sheba was there with an infectious disease team; when the Fuego volcano erupted in Guatemala in 2019, Sheba sent a specialized burn unit to treat victims. Sheba sent a team to Mozambique in the aftermath of cyclone Idai, and a pediatric and intensive care team to Samoa following a massive deadly outbreak of measles. In December 2020, a specialty team comprised of medical and ICU physicians and nurses traveled to Piedmont, Italy to help bear the load, providing additional support and exchanging knowledge with an overwhelmed healthcare system. The list goes on.

Humanitarian aid has been a part of Sheba Medical Center's mission since its establishment in 1948. Over the

years, Sheba has initiated successful missions around the world and has collaborated with national and international organizations in under-served regions.

Founded in 2017 under the direction of Prof. Elhanan Bar-On MD MPH, the Israel Center for Disaster Medicine and Humanitarian Response at Sheba Medical Center is a world excellence center specializing in response to disasters and emergencies and providing humanitarian aid through operational deployment, teaching, training, and research. This includes treating patients and training medical personnel as well as bringing complex patients to Sheba for continued care.

The Israel Center for Disaster Medicine is unique in having the backing of the largest hospital in the Middle East, with all its medical and paramedical personnel, auxiliary support facilities and logistic capabilities. The Center also works in close collaboration with other Israeli agencies such as The Ministry of Foreign Affairs, Magen David Adom, the Israel Fire and Rescue Authority, IsraAID, the IDF Home Front Command and international organizations such as WHO, ICRC and MSF.



OPERATIONAL DEPLOYMENT

The Center deploys medical teams to disaster areas and emergency situations—comprised of Sheba personnel as well as volunteers from other centers and organizations in Israel and overseas. As part of its deployments, the Center is currently in the process of developing the capability to transport, assemble and operate a full field hospital (classified by WHO as a Type 2 Emergency Medical Team), which will be ready for deployment in disaster zones worldwide.

This field hospital can also be used in disaster preparedness on the home front, set up on the grounds of Sheba, or any other center in Israel, in the occurrence of a major event with extensive damage to hospital infrastructure. In fact, this capability allowed Sheba Medical Center to lead the initial response in Israel to the COVID-19 outbreak, establishing the first COVID-designated treatment facility in the country.



HUMANITARIAN RESPONSE

As testament to Sheba's value of providing medical care to anyone, anywhere, the Center is involved in humanitarian medical response projects worldwide, sending critical medical care to those in need. Recent activities include, amongst many others, pediatric cardiac surgery in Nigeria, cataract surgery, dentistry

and community medicine in Papua New Guinea, general surgery and pediatric orthopedics in Tanzania, ear nose and throat surgery in Mongolia and burn care in Haiti.

Sheba's teams do not simply enter, provide care and leave. The medical personnel, led by Prof. Bar-On, forge personal connections with the local staff and continue providing support from afar using telemedicine techniques. They also maintain contact with the patients they treat, some of which are still in touch with Prof. Bar-On and teams years later.

In January 2020, when a burn team traveled to Haiti, Prof. Bar-On reunited with a young woman whom he had treated ten years previously following an earthquake which devastated Haiti in 2010, when she unfortunately had to undergo amputation of her leg. The meeting was very emotional, and the Center planned on bringing her to Israel to provide additional rehabilitation, but it unfortunately didn't happen, initially due to the COVID outbreak, and happily, because a few months later she gave birth to her first daughter. Prof. Bar-On is in constant contact with this patient and recently had a Zoom call with her for her daughter's first birthday. The Center still hopes to bring her to Sheba for further care and rehabilitation.

TEACHING AND TRAINING

The Center offers comprehensive training programs which are tailored to each specific location in which they are operating. After a thorough assessment of local needs and available resources, Prof. Bar-On and his team work with local healthcare teams to upgrade the local level of preparedness and incident management capabilities for mass casualty events and disasters from the prehospital stage, through acute hospital care and rehabilitation.

The training takes place in Sheba's teaching center with lectures, case discussions, tabletop exercises

and simulations. Field outings are organized to various trauma centers, command and control centers, emergency medical services and mass casualty drills are held around the country. Some elements of the training program can be carried out on-site in the trainees' countries by the Center's teams.



RESEARCH

The Center is actively involved in research in the fields of disaster and emergency medicine. This includes clinical and epidemiologic studies as well as research and development in technical aspects of preparedness and operation. The Center is affiliated with The Faculty of Medicine in Tel Aviv University and collaborates with other academic institutions in Israel and worldwide.

LENDING A HAND THROUGH THE GENEROSITY OF SHEBA'S FRIENDS

The Israel Center for Disaster Medicine and Humanitarian Response at Sheba Medical Center is only able to effectively help so many in the direst of need through the generous support of our friends around the world. To find out more about the Center, visit, <https://eng.sheba.co.il/center-for-disaster-medicine> or contact Prof. Elhanan Bar-On at: Elhanan.Baron@sheba.health.gov.il.

SHEBA'S *Global Patient Services:* World-Class Medicine for Patients Across the World

Throughout the COVID-19 crisis, Sheba Medical Center’s Global Patient Services team continuously provided world-class medicine with a personal touch for anyone and everyone—catering to patients across the globe, who benefited from the advanced therapies afforded by our groundbreaking research, premier physicians, and expert surgeons.

In accordance with our motto, ‘Hope Without Boundaries,’ Sheba Medical Center is determined to do all it can to provide the best care for any patient from any corner of the world.

The Sheba Global Patient Services team, adept at streamlining emergency flights, testing, and treatment, creates travel and healthcare packages tailored to each individual patient that encompass everything from clinical consultation, imaging, and laboratory diagnostics to surgery, treatment regimens, and rehabilitation.

To better understand the Sheba treatment experience, here’s one patient’s story:

“Having exhausted all treatment options in the United States, I was encouraged by my doctors to pursue a novel treatment called lutetium therapy. However, since it is not available in the United States, they suggested I travel to Israel for treatment. During my 3.5-month stay in Israel, there were six instances where I had to visit Sheba’s emergency room, and each time I was given a room and seen by someone to assess my situation within 30 minutes. The emergency rooms in America are not as efficient as the ones at Sheba, and the speed with which I was treated in Sheba’s emergency rooms was spectacular. What impressed me most about the medical staff is the level of cooperation between

doctors, nurses, and caretakers. Oftentimes, if we had a question, our nurse would simply call the doctor on the spot to get an answer. That was shocking to us ... I would absolutely recommend Sheba to anyone in need of medical care.” -Brian McGarry, Schenectady, NY



Sheba is available to receive patients through its Global Patient Services.

Contact us at www.shebaonline.org or +972-77-996-6905 to see what high-level medical services we can provide for you.

Patient Process

360° OF SERVICES



On Target: SHEBA'S ARROW PROJECT KICKS OFF 15TH YEAR

The program, which matches students with Sheba's top researchers, will now include high schoolers from the pre-IDF Magshimim program who will engage in the integration of technology in medicine.

In November, Sheba Medical Center's **Arrow Project** (Young Researchers, or "Chetz" in Hebrew) apprenticeship program for medical students opened its 15th year with a festive event attended by Sheba's leadership, representatives of the IDF 8200 Intelligence Corps Unit, researchers, and students. Established in 2006 by Prof. Anat Achiron, the initiative matches selected medical students with experienced Sheba researchers who serve as their mentors, providing hands-on experience to pave their way into the world of medical research.

Over the past three years, the program has expanded as the research duos now also include also a third tier, high school students, including several from Arab communities. This year the Arrow Project boasts 53 medical students from universities across Israel and abroad, as well as 18 high school students from around the country. For the first time, this year's program will include high school students in the prestigious pre-IDF Magshimim 8200 intelligence core program who will engage in the integration of technology in medicine.

To celebrate the event, Arrow published a special book featuring all the research papers, nearly 100 in total, published by participants since the program began 15 years ago.

"The main aim of the Arrow Project is to develop a platform that will strengthen medical students' knowledge and practice, and train them to be better physicians and researchers," said Prof. Eldad Katorza, director of the Sheba Arrow Project. "This is achieved by incorporating the students in integrated clinical work involving research. In addition to performing laboratory work from the early steps of research work, students practice giving lectures, presenting data in scientific meetings, and are taught to write scientific papers."



Sheba Arrow Project 2021-22 participants



(L) Arrow Project Director Prof. Eldad Katorza (left) with Arrow founder Prof. Anat Achiron
(R) Sheba's Dr. Meir Plotnik with his two pre-IDF Magshimim high school student mentees



RECEIVING HANDS-ON RESEARCH EXPERIENCE

"I love the research I'm doing here in Sheba's Arrow Project," said Zoe Haggar Aspitza, a third-year medical student at Tel Aviv University who hails from California and is beginning her second year in Arrow. "One of the great things about this program is that every student presents their research in smaller meetings. We go through the whole experience of making a presentation, public speaking and talking about our research. Now it's much less overwhelming and I feel confident to present my research at a medical conference."

"For 15 years, the Arrow Project has been empowering both American and Israeli medical students to increase their knowledge by integrating themselves into Sheba's world-renowned research programs," said Prof. Katorza, "The program also has a tremendous impact on our impressionable and bright high school students. We are very proud that for the first time gifted high schoolers in the pre-IDF Magshimim program are part of Arrow. This is a unique opportunity for the outstanding young people who will go on to serve in the IDF in the elite 8200 intelligence unit to acquire hands on research skills where technology and medicine intersect, at Sheba Medical Center."

AMERICAN Friends of Sheba

United We Stand

2021 was a momentous year for Friends of Sheba in the United States. As of January 1st, 2021, Sheba's two coastal "Friends of" operations merged into one unified national organization: the American Friends of Sheba Medical Center. The launch was greeted with a new national board, great enthusiasm and a charge from Sheba Medical Center Director General Professor Yitshak Kreiss to grow our American Friends body significantly in the years to come.

The challenges of the pandemic did not make the launch year easy, but we didn't let it slow us down. Active regional boards continued meeting by Zoom in Florida, Texas and Los Angeles. By Q3 we saw that the national organization was on track for a stronger financial performance than the total of the two separate organizations in the prior year.

In June, we hosted an exclusive event at an art gallery in Manhattan that proved massively successful! In addition to existing supporters, many new friends came to hear



Dr. Eyal Zimlichman give a lecture on how the pandemic catalyzed new medical innovations within Sheba. We succeeded in raising six figures in donations that evening alone, with many people interested in becoming more involved with Sheba in the future.

The West Coast did its part as well – a number of successful events were held when Dr. Amitai Ziv, Director of Sheba's Rehabilitation Hospital and of MSR, visited Los Angeles. Younes and Soraya Nazarian hosted an elegant reception at their home where, close to the

Jewish High Holidays, Dr. Ziv spoke about the importance of apologies and training medical personnel to offer them.



EXPANDING SHEBA'S PRESENCE IN THE U.S., FOSTERING LOCAL MEDTECH INNOVATION

The growth of the American Friends was well timed, as Sheba's ARC innovation center significantly expanded its presence in the US in 2021. Two major ARC initiatives, one in an under-served neighborhood of Chicago and one in New Jersey's SciTech City, will allow Sheba's ARC to focus its resources and experience to foster medtech innovation and healthcare improvement in two metro areas in the US that will ultimately serve the entire country.

In October, Sheba signed an MOU with the Liberty Science Center in Jersey City at a groundbreaking ceremony for SciTech Scity, a campus focused on developing scientific and technological innovation and education. Sheba Medical Center's ARC will be SciTech Scity's first tenant, with a medical simulation center and digital health and home healthcare initiatives.



While the challenges of building a new national organization in the midst of a pandemic have been sizeable, Sheba offers such powerful and compelling reasons to engage that everyone involved in the U.S. organization is confident of bright and high-impact days ahead.

CANADIAN Friends of Sheba

Celebrating Health in 2021

This past year has proven to be one of the biggest challenges we had to face all around the world. No matter the trials and tribulations, Canadian Friends of Sheba has remained a strong voice in the community through its support of Sheba Medical Center.

This year, we came together to create our first gala hosted by Canadian Friends of Sheba. **Sheba Under the Stars**, held in May 2021, was a glamorous virtual evening with live entertainment as well as informative presentations on lifestyle choices by leading experts in the field including Dr. Rani Polak, Dr. Joe Schwarcz, Prof. Michal Beeri and Michael Avery.



Canadian Friends of Sheba added some spice to the local community with culinary creativity! Dr. Polak spoke about Sheba's wellness center and its current research. Dr. Joe Schwarcz discussed the chemistry of wine and its many benefits, and Prof. Michal Beeri reminded us how we can remain healthy to prevent Alzheimer's. Attendees of the event enjoyed a live wine tasting together with their wine and chocolate gift bags and entertainment from the event's host Stacey Kay, Juno Award Winner and America's Got Talent Finalist.

If you missed the event, or would like to see how Canada 'does it best', you can view the event on our YouTube channel: <https://www.youtube.com/watch?v=QE2TRvm3G4Q>

We would like to thank our team members in Montreal, and all the donors and sponsors who supported us and Sheba for this beautiful evening.

LET'S GET TOGETHER

For the first time in nearly two years, friends and supporters of Sheba met in person to celebrate **Sheba's Achievements in Women's Health** in October. The delicious brunch was held at The Boulevard venue in Toronto and The Spanish & Portuguese Synagogue in Montreal, and friends from across Canada joined the live stream of the TedTalk style presentations of leading Sheba doctors.



We enjoyed lectures from Prof. Tzipi Strauss, Director of the Neonatology Department; Prof. Michal Beeri, Director of the Joseph Sagol Center for Neuroscience Research; and Dr. Galia Barkai, Director of Sheba BEYOND, Director of Pediatric Infectious Disease Unit.

The audience was engaged and participants—both in person and virtually—inquired about a variety of topics. Alongside the informative lectures, we held a silent auction featuring 17 sought-after prizes donated from the local community. We would like to thank our loyal supporters, sponsors and dedicated volunteers that helped throughout the event.

See the event here: https://www.youtube.com/watch?v=7brPmgEAquc&ab_channel=ShebaCanada

BRINGING HOLLYWOOD TO SHEBA

This past year, Sheba Medical Center hosted an **International Virtual Gala** featuring Prof. Yitshak Kreiss, MD, and guest of honor emcee Shira Haas, renowned for her roles in Shtisel and her award-winning performance in Netflix's Unorthodox. The Gala also featured dignitaries and world-renowned medical experts, and the evening honored the healthcare heroes and supporters of Sheba Medical Center.

Another highlight of the virtual Gala was made possible by Canadian Friends of Sheba. Cantor Benlolo from the Spanish and Portuguese Synagogue in Montreal, as well as Shira Choir, paid tribute to Leonard Cohen, singing Hallelujah! It was a huge success and the official video can be watched here: <https://www.youtube.com/watch?v=Uw6YMZzIsGY>



The Shalva Band, famous for their emotional performance at Eurovision, performed alongside the recording of Hallelujah during the virtual Gala, making this a very memorable part of the evening.

Many exciting plans are in the works for 2022, and Canadian Friends of Sheba looks forward to continuing to support one of the world's top hospitals!

AUSTRALIAN Friends of Sheba

A Year in Review

It has been an exciting year for Australian Friends of Sheba Medical Center (AFSMC). Under the outstanding leadership of chairman Avri Alfasi, AFSMC has already achieved a great deal in the short time since its establishment last March.

The year began with the appointment of AFSMC's first Executive Director, Idan Goldberger, who helped form a board of 10 dedicated professionals including Daniel Abbott, Dr. Genia Rozen, Dr. Geoff Kohn, Prof. Michael Hofman, Dr. Miriam Kuttner, Norman Graeve, Penelope Lane, Stephen Gorenstein and Dr. Stephen Kleid. AFSMC also appointed a Patron, Professor Major General (Ret.) Jeffrey Rosenfeld AC, OBE, a highly regarded Senior Neurosurgeon at Alfred Hospital in Melbourne and former chief medical officer of the Australian military.

This year, AFSMC has been focused on building relationships and establishing ties with hospitals, universities, research institutes and governmental agencies. This effort has resulted in 31 potential new partnerships aimed at developing greater connections between Israeli and Australian medical communities.

One such partnership is with the Peter MacCallum Cancer Centre, a leading global integrated cancer research, treatment and education center. The fellowship program, led by Dr. Liran Domachevsky, Director of the Department of Nuclear Medicine at Sheba, aims to send an expert from Sheba Medical Center to receive further training in theranostics, a treatment strategy that combines therapeutics with diagnostics, as well as create greater collaboration opportunities between two leading cancer institutions to enhance current cancer research. Throughout 2022, AFSMC hopes to add a further 13 collaborations with other top medical, research and academic organizations in Australia.

Discussions are currently taking place in Melbourne and Sydney with both state governments and leading medical institutes keen on collaborating to bring Sheba's ARC (Accelerate Redesign Collaborate) Innovation Center to Australia. ARC aims to bring new technologies into the hospital and community ecosystem to further improve patient care. In particular, there is an accelerated need for digital health and online psychiatric home treatment with the unprecedented increase in demand from patients with mental health concerns as a result of the Covid-19 pandemic lockdowns in both states.

AFSMC has also been focused on raising funds to support dedicated projects such as Sheba's children ICU as well as improving care for Holocaust survivors.

Of course, AFSMC's work would not be possible without the funding that we receive to conduct research projects. To that end, we are proud to have secured 50 percent of the funding for a highly sought-after study in T-cell Receptor Therapy targeting germline antigens in metastatic prostate cancer. The study will be conducted by Prof. Raanan Berger, head of Sheba's Cancer Center, and Dr. Gal Cafri Sheba's Immunotherapy and Genetic Engineering Group Leader.

AFSMC is looking forward to 2022 and anticipates an exciting year in which we will be able to further grow relationships between Israel and Australia's health ecosystems to increase our collective knowledge and improve health outcomes for citizens in both countries.

For more information about our work, please visit our website

www.friendsofsheba.org.au or our [LinkedIn Page](#). You can contact Idan Goldberger at Idan.Goldberger@friendsofsheba.org.au. For Marketing and Communications inquiries please contact Rachel Ash at Rachel.Ash@friendsofsheba.org.au.



(L-R) Idan Goldberger, Executive Director Australian Friends of Sheba Medical Centre, Dr Antonio Castillo, Israel Liaison Officer | Victorian Govt | BioMedical R&D | Commercialisation



(L-R) Avri Alfasi, Chairman Australian Friends of Sheba Medical Centre, Idan Goldberger, Executive Director Australian Friends of Sheba Medical Centre, Professor Thomas (Tom) H Marwick, Director of Baker Heart and Diabetes Institute, Barry Novy OAM, Executive Chairman at Gross Waddell ICR Commercial Real Estate



(L-R) AFSMC's Idan Goldberger, The Hon Greg Hunt MP, Federal Minister for Health and Aged Care and AFSMC's Patron, Prof. Jeffrey Rosenfeld



(L-R) Associate Professor Jason Howitt, School of Health Sciences at Swinburne University, Rilka Warbanoff, Director, Australia-Israel Chamber of Commerce South Australia, Avri Alfasi, Chairman Australian Friends of Sheba Medical Centre, Professor Thomas (Tom) H Marwick, Director of Baker Heart and Diabetes Institute and Antonia Makkar, GM of Philanthropy from Baker Heart & Diabetes Institute.

AFRICAN Friends of Sheba

Bringing Medical Care to South Africa

2021 has been a challenging year for all, African Friends of Sheba Medical Center included, but despite these difficult times, we are proud to say we have had one of our most historic years to date.



This past year, African Friends of Sheba joined Sheba Medical Center's International Virtual Gala featuring Sheba's Director General Prof. Yitshak Kreiss, and guest of honor MC Shira Haas, renowned for her role in Shtisel and her award-winning performance in Netflix's Unorthodox. The gala also featured, for the first time ever, the ambassador to the UAE, amongst other dignitaries and medical professionals.

With Sheba at the forefront of the fight against COVID-19, African Friends has brought Sheba's world-class medicine to South Africa and beyond with five successful webinars, allowing participants to learn from some of our leading doctors. One of our events was so successful it garnered hundreds of thousands of views on YouTube!

We also had an amazing fundraising event in October in a luxurious penthouse in Ir Yamin, Netanya. The event, sponsored by Maxine Marks, hosted many Anglos and new immigrants including the distinguished Israeli Ambassador to South Africa, Eli Belotserkovsky, and his wife. We were privileged to hear from engaging speakers, including Professor Daniel Hershkovitz, Israel's Head of the Civil Service Commission and former President of Bar-Ilan University, Professor Arnon Afek, Deputy Director of Sheba. The Deputy Squadron Commander of F35 also spoke, sharing anecdotes from his service and demonstrating the unwavering integrity of the IDF.

One of our main focuses this past year and one that is carrying us into the future, is our strong relationship with various local Christian organizations. These organizations have shown tremendous support for Israel and Sheba Medical Center, and we are excited to strengthen these ties in the upcoming year.



Global cooperation and collaboration are very important to us at African Friends of Sheba. As such, we are pleased to report on the many patients that have been referred for treatment in Israel through our thriving global patient services program in addition to the abundance of Zoom consultations that have taken place.

Not only are we working on strengthening our global cooperation, but we are also working hard to build thriving relationships with local companies. We have been approached by a wide range of medical companies to collaborate with Sheba and ARC and are excited to see these relationships evolve in the future. Additionally, we are currently very close to signing MOUs with two big companies in Africa, which will bring progress and innovation to all. Stay tuned for news in 2022.

We are excited to see what this upcoming year holds for health innovation at Sheba and will be concentrating on strengthening the global relationship between South Africa and other countries in the African continent and Sheba Medical Center Israel. We know that this international cooperation will better health ecosystems across the continent and help make the world a healthier place.



Sheba performs miracles every day, providing hope and saving lives throughout the world. Ask us about becoming a Friend of Sheba Medical Center so you will not only be able to contribute to these daily miracles, but you'll be able to insure you and your loved ones in your time of need.

For more information about our work or how to become a Friend of Sheba, please visit our website:

www.africanfriendsofsheba.org or our [Facebook Page](#). You can contact Naomi Hadar, Executive Director of African Friends of Sheba Medical Center, at naomi@shebamed.co.za.



LATIN AMERICAN Friends of Sheba

A Year in Review

This past year of 2021 brought with it many amazing opportunities for the Jewish community in Latin America. With the COVID-19 pandemic ravaging the globe, Sheba Medical Center's presence initiation in Latin America has allowed the community to maintain their faith and continue fighting on in the face of these many challenges. Sheba has established several new Friends of Sheba Centers across Latin America in Mexico, Brazil, and Uruguay.

The center in Uruguay was established after a delegation of Sheba doctors and nurses visited the country, showing the impact of and impression Sheba makes around the world. This is the first time Sheba Medical Center has established contact centers in key Latin American communities and this investment in our future is greatly appreciated.

We are proud to announce that Friends of Sheba Latin America has started on the right foot, having hosted several successful webinars over the past year despite COVID disruptions. We look forward to hosting more events in the future, both in person and virtually and are excited to continue our growth in 2022.

For more information, please visit our website www.shebalatam.org or contact Mr. Yossy Bar-Magen, Executive Director at Friends of Sheba Latin America at yossefbm@shebalatam.org.



Sheba's specially trained COVID-19 humanitarian response team aided several major hospitals across Uruguay this year.

SHEBA'S Global Offices

NORTH AMERICA:

United States

Eastern Regional Office

Dorit Basal

Tel: 212 586 4034

Email: dorit@shebamed.org

Midwest Regional Office

Brian Abrahams

Email: brian@shebamed.org

Southern Regional Office

Sheri Zvi

Email: sheri@shebamed.org

Southwest Regional Office

Guy Cohen

Tel: 713 236 7707

Email: guy@shebamedical.org

Western Regional Office

Molly Soboroff

Tel: 310 838 0700

Email: molly@shebamed.org

Canada

Canadian Friends of Sheba Medical Center

Einat Enbar, MBA, Executive Director

Tel: 647 967 2428

Email: info@shebacanada.org

LATIN AMERICA:

Latin American Friends of Sheba Medical Center

Yossy Bar-Magen, Executive Director

Email: yossefbm@shebalatam.org

AFRICA:

African Friends of Sheba Medical Center

Naomi Hadar, Executive Director

Tel: +27 82 90 777 28

Email: naomi@shebamed.co.za

AUSTRALIA:

Australian Friends of Sheba Medical Center

Idan Goldberger, Executive Director

Tel: +61 466 246 800

Email: Idan.Goldberger@friendsofsheba.org.au

EUROPE:

Germany, Berlin

Mrs. Judit Edelstein, President

Tel: +30 437 27220

Email: info@hausverwaltung-stern.de

UK, London

British Friends of the Sheba Medical Center

Mrs. Lesley Khalastchi, President

Tel: +44 20 7586 8611

Email: lesleykhalastchi@gmail.com

France, Paris

F.A.S.T La Fondation Française des Amis de Sheba Tel-Hashomer

Dr. Sylvie Angel & Pr: Pierre Angel, Presidents

Email: Sylvie.angel@pluralis.org

Switzerland, Zurich

Schweizer Freunde des Sheba Medical Center

Tel Hashomer

Dr. Yonat Floersheim, President

Tel: +41 44 2020510

Email: Yonat@bluewin.ch

