

solutions

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### SAVE THE DATE

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**JUNE 5-7, 2018** 

### **HEIGHTS MAGAZINE**

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# Welcome to the 2017/2018 academic year



### FEATURES



What are we doing to protect the Mediterranean?

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**Taking Digital Humanities** to the forefront of Israeli academia

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### Welcome to the 2017/2018 academic year

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Learning in an 'online' and 'open world' has changed the rules of education, and has encouraged us to rethink not only 'how' we teach our students, but also 'what' we teach them.

is with great pleasure that we welcome back students and faculty, new and returning, to the 2017-18 academic year. Both Gustavo and I have had an eventful first year, plan-

ning and setting in motion our multi-campus expansion plans – Israel's first 'multiversity' offering numerous academic portals in the city and throughout the North.

Learning in an 'online' and 'open world' has changed the rules of education, and has encouraged us to rethink not only 'how' we teach our students, but also 'what' we teach them. The rapid pace of technological change dictates that we prepare our students for nonlinear career paths. We must therefore educate for lifelong learning and equip them with skills to match the ever-changing employment and academic landscape. In addition to traditional literacies, 21st century competencies will include critical and creative thinking, computational literacy, collaboration, cultural awareness, communication skills, leadership and ethics.

The University of Haifa's transformative 'multiversity' model addresses these issues by expanding its framework to support new transdisciplinary research and learning. This restructuring enables us to dismantle walls between disciplines, promotes academic partnerships with other research and higher education institutes, increases access to higher education in peripheral regions, and advances emerging fields, such as artificial intelligence, digital humanities, marine conservation and epigenetics.

Starting this year, our students will be able to pursue a bachelor's degree in digital humanities, offered only at Haifa. Another unique program being rolled out this fall for outstanding students



is a 2-year (intensive) BA program in selected departments of Social Sciences and Humanities. We are also launching a major flagship project in Artificial Intelligence, in cooperation with Chinese partners: Hangzhou Wahaha

Group Co and the Institute of Automation, Chinese Academy of Sciences (CASIA).

In the coming year, significant steps towards the inauguration of new academic faculties for engineering (through a merger with ORT Braude College), design and architecture (with NB Haifa School of Design) and agriculture. All three faculties will operate in Haifa and the Galilee. We are on the cusp of building a joint Health Discovery Tower in partnership with the Rambam Health Care Campus, devoted to medical innovation and entrepreneurship, with construction slated to begin next year. Renovation and expansion projects in the port campus are also underway, which will allow moving a portion of the University's activities to downtown Haifa. In addition to expanding academic opportunities, these changes will enhance the University's activities by building robust communities in the city of Haifa and the entire northern region.

A flurry of building activities has kept the campus abuzz over the summer months. A number of public spaces were renovated, the new building for the Faculty of Social Welfare and Health Sciences is progressing steadily, and the construction of a new Donors Garden is nearing completion. Built with the generosity of Prof. Alfred Tauber, Chairman of the Board of Governors, the new Donors Garden recognizes and honors our dedicated friends and benefactors around the world who have supported the University in realizing its vision.

### ARWU Rankings | University of Haifa

	General	Israel
Faculty of Education	101-150	1st place
Faculty of Management	201-300	5th place
Department of Communication	76-100	2nd place
Department of Sociology & Anthropology	76-100	2nd place



The men's basketball team after winning the National Universities Basketball Championship in June.

We are also excited to report that 32 new faculty members will join the University this year, some of whom are being recruited through our returning scientist program. Moreover, in the last year, there has been a significant increase in the research grants awarded by The Council for Higher Education (VATAT) to our researchers – a clear indication of quality of research.

We are also proud to announce a number of honors and recognitions bestowed on our faculty and students. Prof. Wendy Sandler of the Department of English Language and Literature was recently awarded the 2017 Mifal Hapais 'Michael Landau Prize for Science and Research' for her breakthrough research in linguistics. Yuval Salant, a student in the Etgar computer science program for gifted high school students, brought home a silver medal from the Central European Olympiad in Informatics (CEOI), held in Slovania. The men's basketball

team won the National Universities Basketball Championship in a thrilling final match against IDC Herzliya with a final score of 81:72. Finally, we have been honored to host the YIDAN Awards in 2018, the world's most prestigious award for innovation in the field of education.

We would like to take this opportunity to wish you all a happy New Year – a year of health, prosperity and fulfillment. We look forward to another year of growth, creation and inspiration.

Prof. Ron Robin

President

Prof. Gustavo Mesch

Rector



Dr. Dan Tchernov is a marine biologist and the Founder and Head of the Marine Biology Department in the Leon H. Charney School of Marine Sciences. He also heads the Morris Kahn marine research stations in Sdot Yam and Ashdod.

### University of Haifa Welcomes New VP for External Affairs & Resource Development

Dr. Dan Tchernov has been appointed the new Vice President for Resource Development and External Relations starting October 1. Since joining the University in 2009, Dr. Tchernov has been directly responsible for a number of significant fundraising projects for the University. We are confident that his extensive experience will serve to advance the academic interests of the University and the north of Israel. He replaces Yariv Sultan, who after serving a successful term as the VP for Resource Development and External Relations, has decided to pursue other professional challenges. Mr. Sultan was a driving force behind some of the most generous gifts to the University, and we wish him much success in his new endeavors.







### University of Haifa and Rambam join forces to propel

Israel's budding life sciences industry



Rendering of the Health Discovery Tower, a joint initiative between the University and Rambam Health Care Campus, designed to be Israel's future hub for medical innovation and entrepreneurship.

### THE 20-FLOOR HEALTH DISCOVERY TOWER WILL INCLUDE:

- floors for University of Haifa laboratories dedicated to transformational life sciences, public health and pharmaceutical research
- floors for Rambam research institutes, the Graduate School of Dentistry, outpatient services and a Congress and Exhibitions Center
- 2 floors for Technion research facilities
- 4 floors for biotech startup accelerators



INTERVIEW

### : PROF. RAFAEL BEYAR

General Director and CEO of Rambam Health Care Campus, Prof. Rafael Beyar is a renowned cardiologist, medical professor and biomedical entrepreneur. For over a decade he has successfully led Rambam hospital, recognized worldwide for its exceptional patient care. Beyar signed a historic agreement in April with President Robin to establish a joint center for innovation and translational research and for combining patient-centered technology and humanity – the Health Discovery Tower.

### Why is Rambam investing in a Health Discovery Tower?

R.B. - Medicine today is increasingly driven by technology. At the same time, we understand that treating the human condition is a multidisciplinary undertaking which involves all aspects of the medical and allied health sciences. The Health Discovery Tower will bring together under one roof health and medical researchers, clinicians and biomedical entrepreneurs to promote learning and advance medical therapies, diagnostic tools and patient care. It will house innovation laboratories alongside facilities for basic research related to clinical, public health and health services. The Tower will pool the talented resources from Haifa's renowned institutes - the University of Haifa, Rambam and the Technion-Israel Institute of Technology, and serve as a unique model worldwide for knowledge translation, exchange, and transfer. Its location on the Rambam Health Care Campus - adjacent to outpatient clinics, a faculty of medicine, children's hospital, oncology center, heart hospital and advanced clinical resources - will further expedite innovation in the life sciences industry.

### What makes the University of Haifa an attractive partner for this venture?

R.B.-The University of Haifa is the largest research university in the northern region, with a strong foothold in health-related fields. It is widely recognized as a leader in public health, cancer research, neurosciences, bioinformatics and epigenetics research. As Israel's largest academic research hospital in the northern region, Rambam already boasts a long-standing synergy with the University's Cheryl Spencer Department of Nursing and School of Public Health. The Health Discovery Tower will further strengthen these ties and fortify our mission of delivering exceptional patient care, medical education and cutting-edge research.

### What will be some of the initial areas of collaboration?

R.B. - Rambam and the University of Haifa are already working closely on a number of collaborative projects. A team of physicians, researchers and clinicians are using fMRI brain imaging to advance our understanding of chronic pain and improve motor recovery of stroke patients. In addition, Rambam's Department of Otolaryngology and Head and Neck surgery is partnering with the University's School of Public Health to streamline patient-centered health delivery and close



The University of Haifa has embarked upon its \$20 million fundraising campaign for construction of the *Health Discovery Tower*. This center for innovation and translational research – the first such venture in Israel – is a unique collaboration between two leading research universities and a premier medical center. For more information about how to support this historic opportunity please contact the Office of the Vice President for External Relations and Resource Development.

Construction is slated to begin in January 2018.

### 6633

By merging health research with patientcentered medical services under one roof we will create an environment primed for excellence in the development of therapies and diagnostic tools that will change the face of healthcare in hospitals, doctors' offices. and homes worldwide.

- Prof. Rafael Beyar

critical gaps in socioeconomic health disparities (see pages 6-7 for full article). In recent years, joint teams from Rambam and the University have hosted dozens of delegations from the US, Canada, China, India, Africa and South America, who come to learn from the hospital's successful patient care delivery system and Israel's advanced health economic model.

### How will the average healthcare consumer benefit from medical advances born here?

R.B. - Collaborative research at the Health Discovery Tower will accelerate patient-oriented research and innovative interventions for specific diseases and unmet clinical needs. Israel is already an international leader in medical breakthroughs in central disciplines such as cardiovascular medicine, orthopedics, ophthalmology, and inpatient centered digital health, and has earned a reputation for its budding life sciences industry. The shared R&D environment will undoubtedly lead to improved services and technologies and dramatic advances in personalized medicine. In addition to scientific gains and health benefits, I believe this joint venture will also have a broad educational, economic and social impact for the region and future generations.



### With **good management**, universal **healthcare** systems can be **'enough'**

Rapidly advancing medical technologies, aging populations, higher mortality rates and growing crisis of chronic illnesses have resulted in increased government spending on public health. Although Israel boasts one of the most advanced universal health systems in the world, private spending on supplementary medical coverage is on the rise – a sign that Israelis' healthcare needs are not being adequately met.

Israel's highly ranked healthcare system continues to grapple with the constraints of cost, access and quality. A team of researchers at the University of Haifa and Rambam Health Care Campus are spearheading innovative research that focuses on cost-effective management strategies as the key to better healthcare delivery. "There are practical ways to improve the quality of Israel's universal healthcare without increasing public spending or out-of-pocket expenses" explains

Dr. Shuli Brammli, Head of the Health Systems Management Department at the University of Haifa's School of Public Health. "These cost-effective strategies will not only improve delivery of patient care, but help eliminate socioeconomic health disparities."

Dr. Brammli is currently partnering with Prof. Ziv Gil to lead a nationwide transformation in public health policy management that will strengthen healthcare services accessibility. Prof. Gil is the Director of the Department of Otolaryngology Head and Neck Surgery at Rambam and a professor at the Technion–Israel Institute of Technology's Faculty of Medicine.

The proposed policy shift will address some of the shortcomings within the health system that are currently being paid privately by patients.







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Medical schools do not prepare doctors to run surgical departments.

- Prof. Ziv Gil

The inability to choose doctors or surgeons and extended waiting times for surgeries, are some of the acute needs not being met under the current system.

Prof. Gil recently implemented key changes within his department to initiate cost-effective procedures and upgrade patient services. Today, patients can choose their surgeon, enjoy reduced waiting time for surgeries, and are assigned a nurse case manager to coordinate patient care from admittance to discharge.

"We were very impressed with the improved level of care and successful patient outcomes in Dr. Gil's department – a marked improvement over the national average," notes Brammli. "The emphasis on patient–centered services will become the model for reshaping national health policies and strategies."

"Within one year we became the top Head and Neck program in the country in measures of efficacy and volume," says Prof. Gil. "Our work aims to improve the public health system from bottom up, using sustainable approaches to reduce inequalities in access to medical care," continues Prof. Gil, "so as to ensure the best possible care for all. The collaboration pools our clinical expertise with the University two founding pillars – academic excellence and commitment to social responsibility."

Brammli and Gil are currently conducting a comprehensive study to assess the practices put in place in two departments at Rambam. The team plans to further develop management models and meet with decision–makers to present cost–effective strategies for streamlining patient–centered health delivery within the universal system. "We believe that our models will also be applicable to advanced healthcare delivery systems around the world."

Brammli and Gil are co-authoring 'A Manual for Mid-Level Managers in Hospitals and Clinics', a hands-on guide to practical management tools and techniques for hospital department heads, written in English. "Medical school do not prepare doctors to run surgical departments," notes Prof. Gil. "Our approach will prepare new managers in university hospitals for their roles as chairmen and directors of services."

The team's future plans include establishing a joint center on health policy, which will seek to bridge research, practice and policy and better address major health and behavioral health issues of the day.



Prof. Granot is applying stimuli to assess a patient's pain modulation. The computer calculates the nerve conduction velocity, the speed at which nerve impulses travels to the brain.

### Helping pain sufferers regain control of their lives

For millions of people affected by chronic pain, taking control of their pain problem would be a dream come true.

More than one third of Americans and 20–30% of the global population suffer from chronic pain – the leading cause of long-term disability. While the cost of medical treatment and loss of productivity to society is estimated in the billions of dollars, individual suffering is beyond measure. Conventional treatment typically involves the prescription of pain medications, which are effective only for short durations, associated with various problematic side effects, and all too often, lead to abuse and misuse.

A joint research study between the University of Haifa and Rambam Health Care Campus is currently developing a new tool for the assessment of individual pain regulation that may bring about a paradigm shift in pain management and reduce suffering for millions around the world. Dr. Michal Granot, a professor of pain studies at the University's Cheryl Spencer Department of Nursing together with Prof. David Yarnitsky and Dr. Yelena

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Everyone feels pain from time to time - a normal sensation signaling that something is wrong. Chronic pain is different. Pain symptoms can persist for weeks, months and even years. Over time, the condition takes a grave toll on quality of life.

Granovsky, from Rambam's Department of Neurology, are focused on the construction of individual pain modulation profiles. "Pain modulation profiling can be used as a key predictor for pain onset and treatment outcomes, and may be a step forward in providing the best possible care through personalized therapy in pain management," explains Prof. Granot.

As pain is a multifaceted phenomenon, the pain experience varies according to several factors, including gender, ethnicity, personality and culture. "Our joint research is addressing unanswered questions including factors contributing to the susceptibility of individuals at risk for developing chronic pain, those who require less pain medications, and those who may benefit from the rapeutic intervention," adds Prof. Yarnitsky. "It can be described as a multi-disciplinary and multi-professional effort," adds Granot. "As part of the study, the trauma team at Rambam follows patients admitted to the emergency ward for whiplash injuries. Patient data, such as neural activity obtained from fMRI brain scans, psychophysiological assessment of pain threshold, as well as personality and genetic tests, are recorded at a number of points during their hospital stay.

The project has received a major grant from the Ministry of Defense, which supports clinical research that improves healthcare delivery affecting military and veteran populations, and the broader population.





In addition to this collaboration, Granot, Yarnitsky and Granovsky are involved in a number of other pain-related studies. They have also co-authored several scientific papers and are co-mentoring doctoral candidates studying at the Technion-Israel Institute of Technology and the University of Haifa.





Prof. Yarnitsky is the Director of the Department of Neurology at Rambam Health Care Campus, Head of the Clinical Neurophysiology Laboratory at the Technion Faculty of Medicine, and former editor of the respected peer-reviewed journal Pain Reports.

**Prof. Granot** is a member of the University's Faculty of Social Welfare and Health Sciences, and the Haifa Pain Group of the Clinical Neurophysiology Laboratory. Her research interests also focus on women's health and gender differences in pain perception.

### **U of H Brain Imaging Initiative**

Brain and behavioral sciences researchers on campus have banded together to form The Interdisciplinary Forum for Human Neuroimaging. More than 30 faculty members and some 150 students from four different faculties are involved in this unique cooperative effort whose aim is to use neuroimaging tools to promote applied and basic research in fields ranging from behavioral neuroscience to cognitive psychology and physical rehabilitation. Forum leaders are rolling out a wide-ranging agenda that will include hands-on training for MA

and PhD students; full scholarships for postgraduates in innovative fields such as development and aging, human memory and mindfulness; and the purchase and maintenance of advanced neuroimaging equipment. An annual international conference that will attract members of the scientific community from Israel and abroad is also being planned.

Join us in supporting these forward-looking activities by contacting the Office of the Vice President for External Relations and Resource Development.

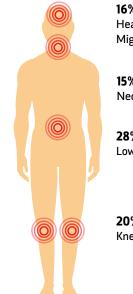
### Chronic Pain is a major public health problem affecting





**100 MILLION AMERICANS** 

### **Most Common Types of Chronic Pain**



### 16% Headache / Migraine

15% **Neck Pain** 28% Low Back Pain 20%

Knee Pain

### **Effects of Chronic Pain**



### **DEPRESSION**

77% Report depressive symptoms as a result of their persistent pain



### **HELPLESSNESS**

51% Say they have little or no control over their pain





**OPIOD ABUSE** Prescription drugs are the 2nd most abused category of drugs after marijuana

Source: the goodbody.com/chronic-pain-statistics

# PROTECTING OUR SEA Our Lifeline and Our Future

The University of Haifa is driving marine science research in Israel and advancing an innovative educational platform for long-term marine conservation strategies for the Mediterranean Sea.

Israel's modest 124-mile coastline is much more than a vital natural resource; it is the country's gateway to the world. A hub for commerce, communications, fishing and gas exploration, it fulfills critical national needs and is essential to our survival. We rely on the Mediterranean for energy, our drinking water, food, and our livelihood. And we depend on it for our security and health.

With the multitude of sectors dependent on the sea, it is imperative that regulatory practices be put in place, observed and monitored. "Protecting the marine environment – the lifeline of our nation – needs to be our highest national priority," says Dr. Dan Tchernov, founding head of the Department of Marine Biology, and former Deputy Director of the Leon H. Charney School of Marine Sciences (2009–11). "As home to Israel's only graduate school of marine sciences, the University has an important role in shaping policy, monitoring the marine environment, generating innovative research and training Israel's future marine scientists, biologists, and ecologists."

According to Tchernov, heavy infrastructure developments in the Eastern Mediterranean Sea Basin, including gas exploration and desalination projects, are taking a heavy toll on the marine environment. "Today, desalination plants supply roughly two-thirds of the country's drinking water - a rate that will reach 90% in the coming years," explains Tchernov. "While the desalination plants are relieving Israel's chronic water shortage, desalination may be affecting water quality and disrupting the ecological balance due to the brine discharge. Moreover, rising pollution levels and the effects of global warming are disturbing the Sea's 'food web' and leading to the extinction of a great number

and leading to the extinction of a great number of marine species. It has also contributed to the influx of marine predators never before spotted near our shores."

The School of Marine Sciences recently inaugurated two marine research centers to support coastal water monitoring and research, the Morris



Founded to ensure the protection of Israel's precious maritime resources, the Leon H. Charney School of Marine Sciences is spearheading a number of unique research initiatives, procuring advanced underwater technologies, fostering graduate studies in newly emerging fields, and heading the Mediterranean Sea Research Center of Israel

Dr. Dan Tchernov is a marine biologist specializing in the ecology and biodiversity of the Mediterranean's deep Levantine basin. He headed the Department of Marine Biology (2009–2017) and was recently appointed the new Vice President for External Affairs and Resource Development.



Graduate students measure and tag a shark to track its migration pattern and food sources. Early this year, a rather large group of sharks was discovered gathering near the power station on the shores of Hadera



The THEMO bayou is a novel monitoring system developed as part of the Texas A&M - University of Haifa Eastern Mediterranean Observatory project, supported by the Helmsley Charitable Trust. This advanced system is operated by the Underwater Acoustics and Navigation Laboratory headed by Dr. Roee Diamant of the Hatter Department of Marine Technologies.

Kahn Marine Research Station located in Kibbutz Sdot Yam, and the Top Predator Laboratory in Ashdod, focused on tracking the behavior of top marine predators who are new to our region, including

dolphins, sharks, rays, and tunas. In addition, last June the University and Texas A&M University collaborated to deploy the first deep-sea buoy of the THEMO project. The station has the capacity to provide advance warning of catastrophic pollutants and ecological disasters. Thanks to generous gifts from our major supporters - The Crown Family Foundation, Sir Mick Davis, Lady Irene and Sir Maurice Hatter, The Leona M. and Harry B. Helmsley Charitable Trust, The J. Isaacs Charitable Trust, Morris Kahn and Mr. Peter Kadas - these facilities are enabling intensive data collection activities that monitor the physical, chemical and biological condition of the Eastern Mediterranean Sea Basin, and advance cutting-edge research at the University in marine biodiversity and food webs.

Recognizing the importance of cultivating locally-trained experts in marine ecology and conservation, the University established a prestigious fellowship program now in its third cohort. "To attract top talent, the PhD program offers a generous scholarship and is supported by an advisory committee comprised of experts from top universities, including Stanford and Princeton, who take an active interest in the academic progress of each fellow," notes Tchernov.

Community outreach is the essence of the School's mission. "We share our research with NGOs such as Eco Ocean and join efforts in campaigns raising awareness of ocean conservation issues by holding joint symposiums, such as the upcoming 'Sharks Conference & D-Dive' in Eilat."

Dr. Tchernov is already planning the next major phase in the development of marine protection and conservation at the University. "We plan to expand the Morris Kahn Marine Research Station to include a Blue Tech Center. The Center will be dedicated to promoting the growing field of blue economy, to sustainably develop our marine-based industries while protecting unique marine ecosystems. As part of these efforts we intend to develop Israel's first Blue Masters of Business Administration program." The Blue MBA program will merge expertise from the Faculty of Management, the School of Marine Sciences, and the Natural Resource and Environmental Research Center headed by Prof. Ofira Ayalon.

The Leon H. Charney School of Marine Sciences is celebrating its 10th anniversary this year, marking a period of remarkable growth in Mediterranean Sea exploration.

We are nearly halfway to our \$100 million fundraising target thanks to the generosity of our dedicated friends and supporters, and the vision of our founding benefactor Mr. Leon H. Charney and partners, The State of Israel, The Israeli Navy, Lady Irene and Sir Maurice Hatter, The Leona M. and Harry B. Helmsley Charitable Trust, The Strauss Foundation, and The Wolfson Family Charitable Trust.



Digital Humanities – the rapidly growing discipline that sits at the crossroads between computer science and the humanities – is transforming scholarship in traditional fields of literature, history, and philosophy and reshaping our knowledge of human culture and behavior.

Reconstructing priceless antiquities using machine vision systems, reinterpreting classical literary works with high powered text-mining techniques, and unlocking the richness and depth of graphic Kabbalistic diagrams using advanced scanning software are a few examples of projects that use digital technologies to advance humanities research in the new information age.

The University of Haifa, recognized for its strength in the humanities and social sciences, is at the forefront of the field in Israel. This year, it will become the first Israeli academic institute to offer a BSc degree in digital humanities. "The ambitious three-year program is attracting students with unique interests," explains Prof. Tsvi Kuflik, co-director of the digital humanities program and former head of the Information Systems Department. "They will be passionate about applying computational resources to cultivate a two-way relationship between humanistic inquiry and digital

power." The unique BSc is based on a double major degree in information systems and the humanities and includes several new specialized courses. The program received prompt approval by the Council for Higher Education.

"The concept of using computing techniques in the documentation and preservation of subjects that fall under the humanities umbrella is not new," notes Dr. Moshe Lavee of the Department of Land of Israel Studies and co-director of the new degree program. "Yet over the past decade a new spirit of collaboration and experimentalism has ushered a major shift in the way scholars and students in the humanities conduct, interpret and share their research. Scholars from the University's Faculty of Humanities have been integrating digital tools into their research activities through collaborations with the Department of Information Systems for several years now."

"The first project I worked on came from a literary scholar, Dr. Ali Hussein, who sought to identify anonymous Arabic poets by spotting common patterns in metaphorical structures of medieval Arabic poetry," recalls Prof. Kuflik. "What seemed at the time like a trivial request turned out to be an interesting challenge involving the application



A novel mobile museum visitors' guide system was developed at the Hecht Museum as part of a joint Italian-Israeli research project applying mobile technology to personalize the museum visitor's experience. The project, headed by Prof. Tsvi Kuflik and Prof. Oliviero Stock of the Bruno Kessler Foundation (FBK) research center in Trento, Italy, aimed at linking the pre, during and post phases of the visit.



Schoolchildren explore a medieval Jewish text written from the collection of the Cairo Genizah, a crowdsourcing pilot project of the eLlijah (e-Learning in Jewish Studies at Haifa) Laboratory led by Dr. Moshe Lavee. The lab is part of the center for Interdisciplinary Research of the Cairo Genziah at the University, founded with the generous support from The Landy Charitable Fund and Foundation Francois et Nicola Grandchamp. The Cairo Genizah is the world's largest and most important single collection of medieval Jewish manuscripts.

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Digital Humanities creates bridges between academic disciplines, research and education. and even the university and the public. As research is made increasingly accessible, the humanities is becoming more relevant to modern society.

-Dr. Moshe Lavee

of high powered computing and text-mining techniques."

Since then, many researchers have turned to the University's Information Systems Department to leverage the power of modern computers to further research. Other projects that followed included collaborations involving 3-D imaging of archaeological collections, the development of virtual exhibits at the Hecht Museum, and a

crowdsourcing project that "filled in" missing texts from fragments of the Cairo Genizah.

The digital humanities program at the University plans to initiate an internship program for students in high-tech firms, public libraries, archives and museums, and will coordinate the participation of students in prestigious

summer exchange programs at partner

universities. Expansion of joint research activities with leading universities are also underway with Oxford, Princeton and the University of Pennsylvania to further develop the Cairo Genizah public documentation pilot into a methological framework for using crowdsourcing in humanities research. In addition, plans are also being set to launch a graduate program in the future.



(l-r) Media Librarian Keren Barner and student Dalya Odem with topof-the-line digital scanner newly installed at the Library for digital preservation projects.

### More digitization on campus

The Younes and Soraya Nazarian Library, among the most advanced in Israel, is participating in a European-wide project that has adopted a digital platform based on machine learning algorithms and advanced technology. The Library's Media, Special Collections and Archives Department, headed by Ora Zehavi, is involved in numerous digitization and preservation projects, including the theses and dissertations database, the research publications repository, and the historical photographs of the Land of Israel collections. It was recently chosen to lead the digitization of archival materials on Israeli theater as part of the newly launched project by the Israel National Library "Land Marks" to preserve Israeli visual culture and performing arts. Over the course of the project the department will collaborate with Prof. Yuval Shaked, Head of the School of the Arts, and faculty members of the Department of Theater.





Prof. Gil Atzmon, Head of the Laboratory of Genetics and Epigenetics of Aging and Longevity at the Faculty of Natural Sciences.

### Did you know?

The study led by Prof. Atzmon identifying the male longevity gene was recently selected to be included in a time capsule showcasing Israeli research with the greatest impact on technology and science over the last decade. The time capsule, organized for the occasion of the 2017 European Researchers' Night, will be placed in the foundations of the new National Library of Israel.

Prof. Gil Atzmon and his research team, together with colleagues at Albert Einstein College of Medicine (Einstein) in New York, recently made international headlines for identifying a gene mutation that significantly extends longevity in men.

as a marker of exceptional longevity

The study, published in *Science Advances*, found that the genetic mutation can extend life in males by ten years, but did not have the same effect on women. "It is known that aging and longevity are related to the growth hormone pathway – now we have found a specific mutation in the growth hormone receptor in males whose presence or absence is directly related to it (longevity)," notes Atzmon. The study looked at data from Ashkenazi centenarians at Einstein and compared it with three other centenarian populations from France and the United States.

In all these groups, the research team found that a deletion of the growth hormone receptor exon-3 was a marker of exceptional longevity. "There is no doubt that the mutation is not the only factor affecting longevity," adds Prof. Atzmon, "but the presence of the mutation almost certainly contributed to longer life. Our goal now is to understand the mechanism of the variation we found, so that we can enable longevity while maintaining quality of life." Further investigation of these genes may enable scientists to design drugs to mimic their effects and slow down the aging process.

Why do some people live longer than others? Can we slow down the aging process? How close are we to 'curing' aging? These questions are fueling the field of epigenetics – a rapidly growing area of biomedical research that focuses on the link between genetics, disease and aging.

With the proportion of people aged 60 and older growing faster than any other age group, population aging has emerged as a global public health issue. Generally accompanied by increased incidences of chronic diseases, such as Alzheimer's and Type 2 diabetes, cardiovascular disease and many forms of cancer, aging populations pose taxing challenges to the healthcare system. Understanding the genetic mechanism that controls aging and longevity will have a profound impact on health, the economy and society.

Research at the Laboratory of Genetics and Epigenetics of Aging and Longevity aims to better understand the association of the whole genome to disease, performance, health and longevity. Scientists at the lab are harnessing new technologies to discover genetic mechanisms that may slow or even reverse aging. Their research activities include a novel approach to examining mechanisms leading to "successful" aging and longevity, comparing two exceptional study groups – centenarians and naked mole-rats (Heterocephalus glaber), the world's longest-lived rodent.

For more information about supporting the pioneering research being conducted at the Laboratory of Genetics and Epigenetics of Aging and Longevity, please contact the Office of the Vice President for External Relations and Resource Development.



**Background:** I was born and raised in Peqi'in, a Druze village in the Western Galilee. I worked as an educational psychologist in the Haifa Municipality's Jewish Education System for several years. I am currently serving as a teaching assistant and am a Joint Program PhD candidate at the Department of Psychology at the University of Haifa and the Faculty of Arts, Psychology, and Theology at Åbo Akademi University, Finland. My degrees are all from the University of Haifa, which I have come to love as a second home.

### My Academic Career Journey:

When I first enrolled at the University of Haifa, I was one of the youngest students in my class and a minority student. There were very few Arabic speakers in my program and it was my first encounter with Jewish students. My initial interactions with the faculty and administration were very positive and put me at ease. I very much enjoyed my undergraduate studies in psychology and decided to continue on to a master's degree. Working on my thesis sparked my passion for research and a desire to become an academic. My thesis explored the link between experiences of interpersonal and inter-group 'rejection sensitivity' - a tendency to overreact to social rejection - and academic, psychological and social adjustment of Druze and Arab students at Israeli universities. While similar work on inter-group 'rejection sensitivity' had been published on African American and Asian minorities studying at American universities, this was the first study of its kind done here in Israel.

### PhD Research:

My PhD research focuses on the effects of modernization on the values and role of faith in the lives of Druze and Muslim students in Israel. It is part of a global research project known as the Young Adults and Religion in a Global Perspective (YARG), headed by Prof. Peter Nynäs of the Åbo Akademi University. The project, conducted in 12 countries across five continents, studies the changing religious subjectivities and values of university students globally. We have completed the data collection phase and are currently compiling our findings, which we hope to publish next year. I am fortunate to have PhD supervisors, from both universities, whom I greatly respect and admire.

### **Future Plans:**

Recently, I presented parts of my work on the YARG study at the Society for the Scientific Study of Religion (SSSR) international conference held at Washington DC on the topic of "The Role of Academic Research in Public Debates of Religious Minorities." I was honored to speak at the conference, and look forward to presenting my research to a broader international audience. In the near future, I hope to publish a number of articles, including a study conducted in collaboration with YARG colleagues in Turkey. Ultimately, my goal is to become a professor and contribute to the study of contemporary religious change, to better understand current transformations in religious life and practice in modern societies.



Sawsan Kheir was the master of ceremonies at the German Friends Festive Reception for Jewish-Arab Scholars held at the University of Haifa's 2017 Board of Governors Meeting.



Dr. Germaw Mengistu at the German–Israeli Literature Festival, held at the Goethe-Institute in Berlin.

### ALUMNI SPOTLIGHT

### When did you first start writing?

G.M. - As long as I can remember, I have held a book in my hand, even before I knew how to read. My father, a devout man who always carried a prayer book, had liberal ideas and dreamed of sending all of his children to school. Out of all my siblings I was the lucky one to be sent to school, a privilege for a boy born in a remote Ethiopian village far from the big city. From a young age I loved language and writing. I am fascinated by how words strung into sentences can create so much meaning - they have the power to delight and comfort, provoke and even start revolutions. Over time, I have come to understand that in the world today, those in control of text can define their truth and in so doing create new realities that can shatter myths, build bridges between people and bring about change.

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I am fascinated by how words strung into sentences can create so much meaning – they have the power to delight and comfort, provoke and even start revolutions.

-Dr. Germaw Mengistu

### How did you react when you found out "A Dream at the Price of Honor" was added to the national liter-

ature curriculum?

**6.M.** - I was of course delighted and honored, not only for the recognition of my talent as a writer, but also for the interest in the heritage of Ethiopian Jewry, which up until now has been underrepresented in the national curriculum. I believe that the story is an important piece of the social mosaic of the Jewish people in Israel.

"A Dream at the Price of Honor" describes the heroic journey and emotional arrival to the Promised Land from the point of view of elders of the community, in an attempt to shed light on Ethiopian faith and customs. Ethiopian Jewry is a proud community whose strong Jewish beliefs withstood the test of time throughout the ages, despite persecution, just like other Jewish communities throughout the world.

Dr. Mengistu completed his undergraduate and graduate degrees at the University of Haifa, earning his PhD in communications in 2016. His awardwinning story, "A Dream at the Price of Honor," was recently added to the national literature curriculum – the first work on Ethiopian Jewry to be taught in Israeli public schools.



### What do you hope to accomplish through your writing?

**G.M.**-I hope that it will trigger the creation of more literary works on Ethiopian Jewry. Most young Israelis do not know much about the Ethiopian community. This story offers a glance into its rich culture and heritage. For young Ethiopian 'Sabras' who have up until now only studied the histories of European and Middle Eastern Jewry at school, these stories act

as a link to their Jewish roots, to characters and places they can relate to. By teaching about our own community and learning more about our own history, we can bring about change, dispel myths and build bridges between communities for a more just society.

### Memories from the University of Haifa

6.M. - The stunning views from the Haifa campus, set high on the Carmel mountain range, reminded me of my childhood home. It was among the first academic institutions in Israel to offer academic opportunities to Ethiopian-born students, as well as assistance in adjusting to campus life. Many of my fellow graduates who studied here have gone on to hold key leadership positions.

### Honoring the Legacy of Israel's Ethiopian Community

The Story of the Ethiopian Community Project, a unique undertaking that is digitally recording and documenting Jewish folklore from Ethiopia, is about to release a new book, Two Thorns do not Join. A collection of 50 folktales, the Project aims to create a direct dialogue between academics and the Ethiopian community and shed new insights into Jewish life in Ethiopia, immigration to Israel and integration into Israeli society.

The Ethiopian Collection is part of The Israel Folktale Archives named in honor of Prof. Dov Noy, housed at the University. Led by Dr. Haya Milo from the Faculty of Humanities, the Project is generously supported by the Polonsky Foundation and the National Council of Jewish Women of Australia.

I completed all three of my degrees at the University and loved studying here. Early on, I was involved in the Student Union during the time that Prof. Ron Robin was the Dean of Students. He helped us launch services for economically disadvantaged students to ensure they could afford decent meals. Thanks to generous supporters, I was given subsidized dorm room accommodations and received two very generous scholarships, from the Polonsky Foundation in the UK, and the Allen Family in the US. I would like to offer my sincerest thanks to these two dear families. For me, your support has been more than financial - your faith in me helped me believe in myself and inspired me to achieve my goals. I will always be extremely grateful to you for that!

### What are your plans for the future?

**G.M.-** I hope to start my post-doctorate fellowship in the near future at the Elizabeth and Tony Comper Interdisciplinary Center for the Study of Anti-Semitism and Racism, headed by Prof. Eli Avraham. I would like to continue investigating communication for social change.

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The University was among the first in Israel to offer academic opportunities to Ethiopian-born students.

-Dr. Germaw Mengistu



### New Research Laboratory Dedicated to Helping Children at Risk

he inauguration ceremony of the Sagol Research & Therapy Laboratory for Children at Risk took place on June 25th at the Dr. Hecht Arts Center. Established with the generosity of long-standing University benefactors, Tova and Sami Sagol, the Laboratory is focused on generating practical and effective interventions and assessment tools for working with at-risk children and youth.

Tova Sagol was an honored guest at the dedication ceremony, attended by President Ron Robin, University Rector Prof. Gustavo Mesch, Prof. Faisal Azaiza, Dean of Faculty of Social Welfare and Health Sciences, Dr. Cochavit Elefant, Director of the Graduate School of Creative Arts Therapies (CAT), and Prof. Rachel Lev-Wiesel, Director of the Emili Sagol Creative Arts Therapies Research Center.

The festive dedication ceremony coincided with a 3-day International Conference

on Therapeutic Interventions and Assessment Tools for Children and Adolescents at Risk, hosted by the Emili Sagol Creative Art Therapies Research Center. Over 250 health professionals and policymakers from Israel and around the world gathered to share their research and discuss the latest tools and techniques in the field. The event was arranged in cooperation with the Israeli Friends of the University of Haifa.



(*l*-r) Ricardo Zanfardini, Carlos Caballero, Prof. Gustavo Mesch, and Prof. Lily Orland-Barak, Dean of the Graduate Studies Authority.



### Argentine Social Welfare Agencies Explore the Breadth of the University's Work around Education and Child Development

he University welcomed two dignitaries from Argentina to the Haifa campus this summer, as part of stepped up efforts to expand partnerships in Latin America. Ricardo Zanfardini, Deputy Secretary for Children and Families in the Argentine Ministry of Social Welfare, and NGO leader Carlos Caballero of Gestion Educativa y Social (GES), came to explore the breadth of research generated at the University, in the areas of child development and education.

Over the course of their visit, they met academics from the Faculty of Education, the Center for Child Development and the Edmond J. Safra Center for Brain Research who presented their latest studies. The visitors also met Prof. Roni Strier, Director of the University's Flagship Program Combating Poverty and Social Exclusion. Prof. Strier travelled to Argentina in July to meet with governmental officials and academics about developing opportunities for collaboration. They concluded by meeting a group of students from the Druze Academic and Social Leadership program, supported by the South African Cape Gate Foundation, who shared their experiences of volunteering in their communities.

The visit, arranged in cooperation with the Argentinian Friends of the University of Haifa, follows Prof. Gustavo Mesch's tour of Latin American countries last fall, where he met academic leaders and senior government officials, including the Argentine Minister of Education, Esteban Bullrich.





### Friends and Supporters Celebrate Conferment of Honorary Doctorate

he University of Haifa recently awarded a Doctor of Philosophy, Honoris Causa to Mr. Avi Benlolo at the annual Mount Carmel Dinner. Organized by the Canadian Friends of Haifa University in Toronto, the event was attended by over 550 people, including representatives of the University Administration, Mr. Mooly Eden, Chairman of the Executive Board, Dr. Dan Tchernov, Vice

President for External Affairs and Resource Development, and Prof. Hanan Alexander, Dean of the Faculty of Education.

Mr. Benlolo, President and CEO of Friends of Simon Wiesenthal Center, received the honorary degree in recognition of his work as a prominent Canadian human rights activist and accomplishments in Holocaust education and combating anti–Semitism. Benlolo joins a distinct group of exceptional individuals awarded honorary doctorates by the University for their unique

contributions to diverse areas of education, science, justice, society, culture and the State of Israel. Proceeds from the Dinner will establish the Avi Benlolo Scholarship Fund in National Security Studies.

Carmel Dinner Chair and major University

During the event, Dr. Peter Rosenbaum, Professor of Pediatrics at McMaster University, was also honored with the University's Carmel Award of Merit in recognition of his lifetime achievements in childhood disabilities research.



Mr. Talat Othman (1st from left), Ali Ata (4th from right) and founding members of the Arab Student Scholarship Fund, with President Ron Robin, Prof. Mouna Maroun, Head of the Sagol Department of Neurobiology (2nd from right), and student scholarship recipients Sheren Falah and Dima Ghazali (far right). Sheren and Dima shared their student experiences and spoke about the importance of education as a means to create opportunities essential for improving their lives, families and communities.

### Expanding Scholarships for Arab Students in Israel

he Arab Student Scholarship Fund, established by a group of Chicago's prominent Arab-American businessmen, held its inaugural fundraising dinner in mid-September. The event, attended by more than 100 supporters, was dedicated to raising awareness and funds for Arab students at the University of Haifa, and to promote higher education among Arab youth.

Established in 2015, the Scholarship Fund is led by Ali Ata and Talat Othman, distinguished leaders of Chicago's Arab community. The Fund has so far provided support to more than 60 students in undergraduate, masters and PhD programs at the University.



The University supports a range of student programs that help Arab and Druze scholars acculturate to campus life and succeed in their studies. The University is currently seeking funding to launch a fellowship program for talented Arab researchers that will provide them with opportunities to learn, train, and become prime candidates for leadership roles in the University's research laboratories.



### RECOGNIZING AND HONORING OUR SUPPORTERS

Project: Donors Garden that naturally blends into the Mt. Carmel landscape
Location: Adjacent to the Multi-Purpose Building at the Carmel Campus Entrance
Design: The focal point of the garden is a winding dry riverbed whereupon plaques in the names of founders and benefactors will be engraved. The river dips into a holding pool symbolizing life and abundance. A Donor Wall was erected at the holding pool under the large oak tree. Along the banks of the river, a number of rest areas were installed and a variety of native plants planted, including a rose garden.

The University of Haifa is deeply appreciative of its dedicated friends and supporters around the world who have helped us realize our vision of becoming a world-class comprehensive research university. Their generosity has helped to propel the University forward-establishing scholarship and fellowship funds, supporting research activities and building a thriving campus.

As the University launches its ambitious "multiversity" expansion plan, a number of exciting new building projects are shifting into high gear. One of these projects, the new Donors Garden, is a way of saying thank you to those who have helped to make the University of Haifa's main campus a reality.

The Garden is being built with the generous support of Prof. Alfred Tauber, Director of the Laszlo N. Tauber Family Foundation and Chairman of the University of Haifa's Board of Governors. We look forward to its dedication in June 2018.

### PLANTING THE SEEDS OF KNOWLEDGE

The Laszlo N. Tauber Family Foundation was established in 2003, in memory of Laszlo N. Tauber. The Foundation supports diverse educational and research activities at the University of Haifa, ranging from programs in psychiatric rehabilitation, evolutionary biology, marine sciences and bioinformatics to music appreciation. The Foundation's commitment to Jewish-Arab coexistence and to student scholarships attests to its broad philanthropic and social mission.

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