LEADERSHIP FOR TOMORROW

NEW FACULTY SCHOLARS AND SCIENTISTS

CELEBRATING 100 YEARS OF THE HEBREW UNIVERSITY OF JERUSALEM
A University is only as strong as its faculty and students.

Faculty members are the researchers, the teachers, the scholars, the mentors, and the entrepreneurs – today and of the next generation. They are the backbone of any institution of higher learning.

The Hebrew University takes great pride in recruiting the most promising Israeli young minds to its ranks, seeking also to diversify perspectives by welcoming top scholars from abroad and from groups historically underrepresented in Israeli academia.

We invite you to meet a small sample of the Hebrew University’s recent ‘acquisitions’—the groundbreakers and leaders of tomorrow whose discoveries and contributions across disciplines will shape our society, both in Israel and across the globe. These excellent young scholars, along with their colleagues, are our future.
At the time the State of Israel was founded, it had just two institutions of higher learning. Despite massive challenges facing the fledgling state, its founders understood the importance of education to the country’s future. This initial investment made it possible for Israel to boast a number of top ranked universities within a few short decades, and for the young country to become what is known today as the ‘Start-up Nation’.

In time, less public investment was made in higher education, while student enrollment continued to soar. The long term result was fewer faculty members per capita, aging research infrastructure, and losing some of our best minds to universities abroad.

Today, we are well on the way to reversing this trend. Jerusalem is now a first choice destination for Israeli and international scholars alike. The Hebrew University is committed to recruiting some 50 outstanding new faculty members each year — the academic leaders of tomorrow.

Just as the investment in higher education by Israel’s founders ensured the strong University system that was to follow, a current investment in faculty members will ensure that decades into the future, the Hebrew University will continue to make important contributions to world science and discovery, to the study of society and culture and to teaching the next generation.

Each and every new faculty member that we bring into the University is pushing the envelope in her or his field of expertise.

PROF. ASHER COHEN
PRESIDENT
NEW FACULTY IN NUMBERS

355
ANTICIPATED NEW FACULTY*
58%
IN STEM FIELDS*

*2018-2025

A TYPICAL COHORT

78%
RETURNING ISRAELIS

10%
INTERNATIONAL

34%
HU ALUMNI

$1.2M
COST OF AVERAGE EXPERIMENTAL LAB
The University granted me multiple opportunities for research and teaching when I was a student. I am happy to have closed the circle and returned as a faculty member.

DR. SHARON ARIELI
BUSINESS
INVESTIGATING OUR BIOLOGICAL VACUUM CLEANER

Born and raised in Glasgow, Dr. Simon Yona has spent most of his adult life researching the immune system, and the way our body reacts to, and defends itself from, the outside world.

Having conducted research at the University of Oxford, the Weizmann Institute, and University College London, Dr. Yona has now brought his lab to the Hebrew University. There he is investigating how macrophage cells – known colloquially as ‘the conductors of our immune orchestra’ – operate our immune system, both in healthy conditions and in conditions of chronic diseases like cancer, Alzheimer’s and Parkinson’s.

A second aspect of Dr. Yona’s research will involve investigating immune cells in the oral mucosa – the mouth – which naturally encounter many bacteria on a daily basis. Deeper understanding of these cells could lead to strategies for combating oral cancers.

On a daily basis, I am unwaveringly motivated by an absolute curiosity of science and the magnificent workings of the human body.

DR. SIMON YONA
DENTAL MEDICINE
UNDERSTANDING THE BRAIN’S COMPLEXITY

Dr. Eran Eldar is investigating the computational algorithms that the brain implements when solving fundamental learning problems and decision-making processes. “If you want to understand people and the differences between them,” says Dr. Eldar, “that is a good place to start.”

His academic journey began with a degree in medicine from Tel Aviv University. Veering in the direction of research, he did a doctorate at Princeton University on computational neuroscience and postdoctoral studies at the Max Planck Center for Computational Psychiatry and Ageing Research at University College London.

Today, he is researching how people process and learn from rewards and their subsequent mood fluctuations. His use of computational algorithms opens up a mathematical lens through which the physical complexity of the brain and of behavior can be studied and understood.

“Computational cognitive research promises to make a meaningful contribution to psychiatric practice, improving how we diagnose and help people with mental disorders.”

DR. ERAN ELDAR
PSYCHOLOGY
I am interested in the question of what makes us responsible for our actions. I am in search of a deeper understanding of why we punish, what justifies punishment.

DR. LEORA DAHAN KATZ
LAW
FIGHTING DISEASE ONE BIOMOLECULE AT A TIME

While DNA is the source of information for maintaining life, proteins and RNA are the source of functionality. These macromolecules function as autonomous nano-machines performing biological activities important for cell survival.

Nowadays, much knowledge about the structural aspects and activities of these proteins is based upon computational simulations. Very few experimental techniques enable direct measurements of these characteristics. In this way, Dr. Eitan Lerner, who has recently returned from postdoctoral training in UCLA, is a pioneer in his field. He explains how his laboratory “is specializing in the direct measurement of these biomolecular systems, one biomolecule at a time. In this way, my research could have a profound effect on a number of medical conditions, from the development of more robust antibiotics to improved drug design for effectively treating Parkinson’s Disease”.

“I feel honored to be practicing scientific innovation in Israel and in particular to be tying my work to the Hebrew University.”

DR. EITAN LERNER
LIFE SCIENCES
ERADICATING MOSQUITO BORNE DISEASES

Dr. Philipppos Papathanos’ path to a faculty position at the Hebrew University has been somewhat unusual. Born in Athens, Dr. Papathanos moved to Nigeria at the age of nine before undertaking university studies in London. He completed his doctorate at Imperial College London, where he investigated the development of gene drives in malaria mosquitoes. In time, Dr. Papathanos began to blend pure scientific research with ground-breaking, life-saving applications in Africa.

When reflecting on his career thus far, Dr. Papathanos feels a tremendous amount of pride in being one of the pioneers of his field. “Over the last few years, research has served to halve the number of annual deaths from malaria... My mission is to continue on that path using emerging technologies and hopefully contribute my piece towards the eradication of this disease entirely.”

“The Department of Entomology is the only department in Israel of its kind. It is a perfect place for me to carry out my research and advance the field.”

DR. PHILIPPOS PAPATHANOS
AGRICULTURE, FOOD AND ENVIRONMENT
A Diversity of Disciplines

DR. ABRAHAM MERZEL
EDUCATION

DR. YAEL BAR-ZEEV
PUBLIC HEALTH

DR. ALENA WITZLACK-MAKAREVITCH
LINGUISTICS

DR. URI DAVIDOVITCH
ARCHAEOLOGY
In practice, I am a researcher, but by nature, I would define myself as a ‘social worker researcher’. I hope my research will have a concrete impact on practical policies.

DR. HADASS MOORE
SOCIAL WORK
AN INSIDE GLIMPSE INTO A BABY’S GUT!

A look at a six month old’s dirty diaper can reveal surprisingly insightful discoveries. Dr. Moran Yassour is researching the human microbiome, the microbial world that lives in and on our body, more specifically the establishment of gut bacteria among infants – and its impact upon pediatric health.

Always interested in both genetics and computer science, Dr. Yassour is delighted to join the Hebrew University’s combined program for computer science and medicine. No newcomer to the University, it was home to her undergraduate, master’s and doctoral studies.

Her recent appointment is a natural progression from her six-year postdoctoral studies at the Broad Institute of MIT and Harvard University where, through computational research, she developed tools for analyzing next generation sequencing data; tools that have been used in hundreds of research laboratories around the world.

“Computational approaches are offering solutions to previously unanswered biological questions. I hope to discover the true contribution of our gut microbiome to human health and to find ways to manipulate it in order to combat and prevent allergies.”

DR. MORAN YASSOUR
MEDICINE & COMPUTER SCIENCE
PINPOINTING THE POINT OF CONFLICT

Dr. Areej Sabbagh-Khoury was born and raised in the village of Mi’ilya in the Galilee. She completed all of her degrees at Tel Aviv University and joined the Hebrew University following postdoctoral fellowships at Columbia University, New York University, Brown University and Tufts University.

Her research focuses on the political and historical sociology of Israeli and Palestinian societies. She explores the interactions between different aspects of Zionist history and ideology vis-à-vis liberal and social ideologies.

Dr. Sabbagh-Khoury employs unique research approaches involving a critical methodology of archives and oral history which is considered innovative in the Palestinian-Israeli context. Using these approaches, she further probes the collective memory and citizenship of Palestinians in Israel, with a particular focus on Palestinian women and the challenges they face in entering the political leadership of their communities.

“I feel that the Hebrew University aspires to have people with many different opinions and from different backgrounds. This fosters academic excellence and triggers social change.”

DR. AREEJ SABBAGH-KHOURY
SOCIOLOGY
ERADICATING THE NEED FOR HUMANS

Dr. Yedid Hoshen’s family has long been connected with the Hebrew University, from his great grandfather who was active in the South African Friends, to his grandfather, a professor emeritus, and his entire immediate family who are all graduates of the Hebrew University. With his academic journey starting in Oxford at age 15, Dr. Hoshen is no newcomer himself, having previously earned his PhD here in computer science, focusing on deep learning, computer vision and speech recognition.

Today, Dr. Hoshen is investigating deep learning methodologies, a subset of artificial intelligence based on neural networks. Most recently he was researching methods of self-supervised learning that allow computers to make analogies on their own, without the requirement for human supervision.

This research has tremendous potential for generating automatic connections between data sources and scientific research – thus moving past human limitations and advancing the entire field of science and research.

“I believe that enabling computers to make unsupervised analogies will eventually allow computers to make autonomous scientific and technological discoveries without the need for human supervision.”

DR. YEDID HOSHEN
COMPUTER SCIENCE & ENGINEERING
PURSUING THE UNPREDICTABLE

An alumnus of the Technion Israel Institute of Technology, Dr. Raam Uzdin is not a newcomer to the Hebrew University. He did his postdoctoral studies here, researching quantum effects in nanoscopic heat machines and working with one of the founding fathers of the field, Prof. Ronnie Kosloff.

Today, quite uniquely, Dr. Uzdin’s field of quantum thermodynamics blends together two fundamental – yet contrasting – areas of science: quantum mechanics, usually focused on nanoscale materials; and thermodynamics, mostly concerned with bulk materials. Both fields address the physical phenomena of light and matter, yet from different ends of the scale.

Through using thermodynamics to extrapolate at the point at which quantum mechanics are unable to, Dr. Uzdin is pushing the boundaries of predictability and questioning assumptions about the very nature of our world.

What I love about quantum thermodynamics is that it is not just about looking for answers, but rather it is also about trying to formulate the actual questions!

DR. RAAM UZDIN  
CHEMISTRY
We aim to advance our ability to repair the brain by creating a healthy cellular microenvironment that first promotes neuroprotection to stop disease progression and second, promotes regeneration to restore lost function.

DR. NAOMI HABIB
BRAIN SCIENCES

SOLVING THE SECRET OF COGNITIVE RESILIENCE

Combatting age-related pathologies and neurodegenerative diseases requires the ability to block the degeneration process as well as to repair existing damage, thereby restoring lost function.

The cellular microenvironment in the brain is composed of multiple cell types. Dr. Naomi Habib has developed technologies for studying, at a completely new resolution and scale, how interactions between these different cells in the brain contribute to cognitive decline. Through combining these cutting-edge technologies with advanced computational analysis and modeling, Dr. Habib is hoping to solve the secret of cognitive resilience.

Dr. Habib completed all three of her degrees in computational biology at the Hebrew University of Jerusalem. She then spent six years as a postdoctoral fellow at MIT and Harvard. Dr. Habib has now returned to the Hebrew University’s Edmond and Lily Safra Center for Brain Sciences (ELSC) where she specializes in cognitive decline and resilience.
FROM TRAGEDY TO TRIUMPH – THE PATH TO CURING CANCER

Born and raised in a lower-class neighborhood in Jaffa, Dr. Lior Nissim’s story is one of triumph over adversity. Tragically, when he was just three, his mother died of cancer – a pivotal moment in what became Dr. Nissim’s life’s mission, to cure cancer.

During his doctoral studies at the Weizmann Institute of Science, Dr. Nissim pioneered the very first genetic circuit designed to precisely target tumor cells. Continuing with postdoctoral studies at MIT, he further advanced this line of research by developing synthetic gene circuits, encoded on a virus, which provoke an effective anti-tumoral immune response when detecting signs of cancer.

In his new synthetic biology lab at the Hebrew University, Dr. Nissim plans to further advance this approach towards clinical implementation and adapt it to treat additional tumor types. “Within five to ten years,” he predicts, “I hope to start clinical trials... and at that point we will start to see the real fruits of my labor.”

“I came here to cure cancer and the Hebrew University is the best place for me to take my research to the clinic.”

DR. LIOR NISSIM
MEDICINE
EXPLORING THE HUMANITIES THROUGH A DIGITAL LENS

Dr. Renana Keydar is the Hebrew University’s first academic appointment in the digital humanities, a field that explores the humanities using digital and computational methods to create new questions and approaches.

Dr. Keydar’s appointment is a natural progression of her interdisciplinary academic journey that includes Tel Aviv University, Stanford University, the Van Leer Jerusalem Institute and the Hebrew University’s Minerva Center for Human Rights. Previously, Dr. Keydar practiced law, representing the State in constitutional, human rights and public administrative law cases before the Supreme Court.

Today, her research explores questions of justice in the wake of violent conflicts. Combining law and literature with digital humanities tools, Dr. Keydar broadens the lens in order to discover insights and knowledge that would otherwise have remained inaccessible. Dr. Keydar hopes that expanding our understanding of grave human rights violations in this way will help us create a better, more secure future.

“The opportunities offered to me by the Hebrew University to design my own interdisciplinary path are unmatched by institutions abroad.”

DR. RENANA KEYDAR
LAW & HUMANITIES
Investing in the Future

The Hebrew University’s future contribution to society—expanding the frontiers of knowledge, cultivating the next generation of leaders for Israel and beyond—will depend in large part upon our ability to attract the best and brightest new faculty members.

This rides on our ability to offer research conditions comparable to those at top universities around the world. Experimental scientists require state-of-the-art labs and access to research funds, while all scholars require talented mentors, colleagues and students, and the overall research conditions that encourage innovative, multidisciplinary research.

The scholars in these pages and their colleagues are the leaders of tomorrow. We invite you to partner with us in investing in their future and in the future of higher education in Israel.
THE HEBREW UNIVERSITY OF JERUSALEM
T: +972.2.588.2804
E: campaign@huji.ac.il
W: campaign.huji.ac.il

AMERICAN FRIENDS
T: +1 212.607.8500
Toll Free: 1.800.567.AFHU
E: info@afhu.org
W: afhu.org

AUSTRALIAN FRIENDS
T: +61.2.9389.2825
E: austfhu@austfhu.org.au
W: austfhu.org.au

BRITISH FRIENDS
T: +44.2.8349.5757
E: friends@bfhu.org
W: bfhu.org

CANADIAN FRIENDS
T: +44.20.8349.5757
Toll Free: 1.888.HEBREWU
E: info@cfhu.org
W: cfhu.org

EUROPEAN FRIENDS
T: +972.2.5882809
E: europeanoffice@uhjerusalem.org
W: efhu.org

ISRAEL FRIENDS
T: +972.2.5882840
E: israelfriends@savion.huji.ac.il
W: alumni.huji.ac.il
W: shocharim.huji.ac.il

LATIN AMERICAN FRIENDS
T: +972.2.5882942
E: arielab@savion.huji.ac.il

SOUTH AFRICAN FRIENDS
T: +27.11.645.2567
E: safhu@beyachad.co.za
W: safhu.co.za