



THE HEBREW
UNIVERSITY
OF JERUSALEM

President's Report
2016

BUILDING A BRIDGE TO A BETTER TOMORROW

Towards 2020



President's Remarks

The guiding thread at the University for every activity in which we partake is an unwavering commitment to excellence. Like the majority of global leading research universities, we are a comprehensive university that strives to advance our scholarship in all the fundamental academic fields including the humanities, social sciences, law, agriculture, sciences and medicine, social work, business administration and dentistry.

In each one of these areas, we seek to incorporate our three driving pillars – research, education and social responsibility. These pillars are the foundation that prepare our students to be the leaders in society and that will ensure the continuation of academic excellence for our future researchers.

As we look towards 2020, I wish to highlight a few of our goals that we believe will solidify our position as the number one ranked university within Israel and continue to grow our international ranking in the top 100 universities globally.

That the Hebrew University is one of the world's leading universities is in many ways a testament to the excellence of our faculty. One need only to look at the highly prestigious prizes awarded to our faculty listed further on in this report to understand that the distinction of our faculty is the very fabric of this institution.

To continue this tradition of excellence, a central goal over the coming years is to recruit new young faculty members and to provide them with the academic, technological and social environments that



foster personal growth and development. By 2020, we aim to add 550 new researchers to our academic community to ensure that we maintain a critical mass of new talent in the University.

Internationalization also plays an important role in our vision over the next five years. In recent years, we have actively sought international collaborations with universities across the globe and we expect to continue this trend in the future—both in research and education.

Finally, the University believes that it has a social responsibility to make its resources and knowledge available to the broader community both in Jerusalem and the State of Israel. Looking towards 2020, we intend to foster and strengthen connections of mutual contribution between the University, Jerusalem, and the State of Israel to affect positive social change leading towards a more peaceful and equal tomorrow.

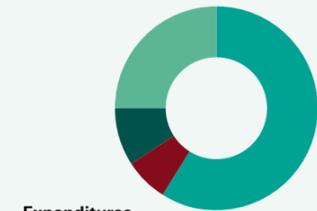
With these three pillars in place, we believe that the Hebrew University will impact future generations with the quality of its scholarship, research and contribution to Israel and the world.

A handwritten signature in black ink, reading "Menahem Ben-Sasson". The signature is fluid and cursive, with the first name being the most prominent.

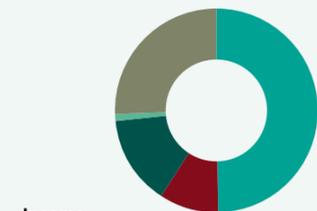
Professor Menahem Ben-Sasson
President

Expenditures & Income

2014-2015 (in US \$ millions)



Expenditures		
Salaries & Pension	452	(59%)
Acquisitions	53	(7%)
Scholarships	68	(9%)
Other	191	(25%)
Total Expenditures	764	(100%)



Income		
Government (PBC)	377	(50%)
Student Fees	72	(10%)
Friends of HU	107	(14%)
Yissum	9	(1%)
Others	192	(25%)
Total Income	757	(100%)

Amounts Received from Friends Organizations

Grand Total (100%)

106,803

Source of Income	Australia	Canada	Europe	Israel	Latin America	Other Countries	UK	USA
Total Income	2,988	9,239	15,405	6,238	3,142	948	7,977	60,581
Percentage of Total	3%	9%	14%	6%	3%	1%	7%	57%

Campaign Summary

Donations by Year (in US \$ millions)

Total Campaign 2006-2015

\$1,000,394,360

Average

\$107,185,198



Amounts Received from Friends Organizations

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The Challenge of Budgetary Pensions

As the oldest and the largest of Israel's institutions of higher education, and the largest employer in Jerusalem, in the past as in the present, the Hebrew University has been facing an ever-growing financial commitment to its retired personnel. The growth of the University's pension expenses has surpassed that of its operating budget as a whole. Thus, while the University's pension expenses in 2000 represented 19.4% of its operating budget, these grew to 33.9% of the operating budget in 2014, as seen in the graph below.

In order to cap the growth of its actuarial obligations, the University has registered all new employees since 2000 in independent external retirement funds. As demonstrated in the graphic representation (bottom right), annual pension payments will begin to decline after 2019.

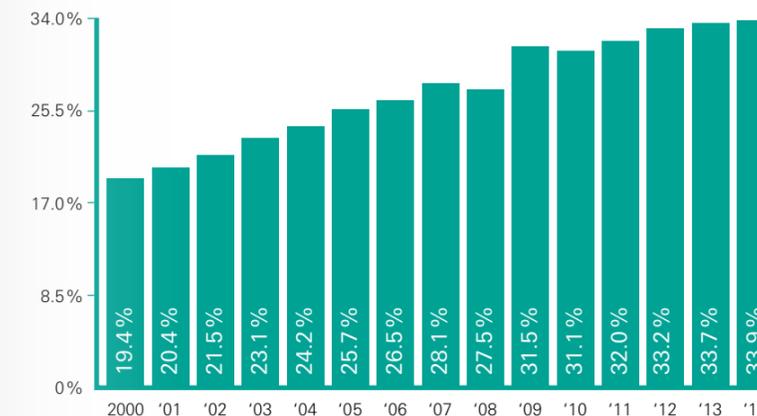
In addition, over the past five years, the University has been in the midst of implementing a recovery and renewal program that was written in coordination with the Council for Higher Education's Planning and Budgeting Committee (PBC) and in full agreement with it, and was ratified by Professor Manuel Trachtenberg, then PBC Chair, in 2012. The recovery and renewal plan is intended to set the University on the road

to full recovery and to uphold it as Israel's leading institution of higher education, as well as to find a long-term solution to covering the cost of budgetary pensions. The plan is the outcome of the deep commitment of the University's administration together with the PBC leadership to address the structural and financial problems.

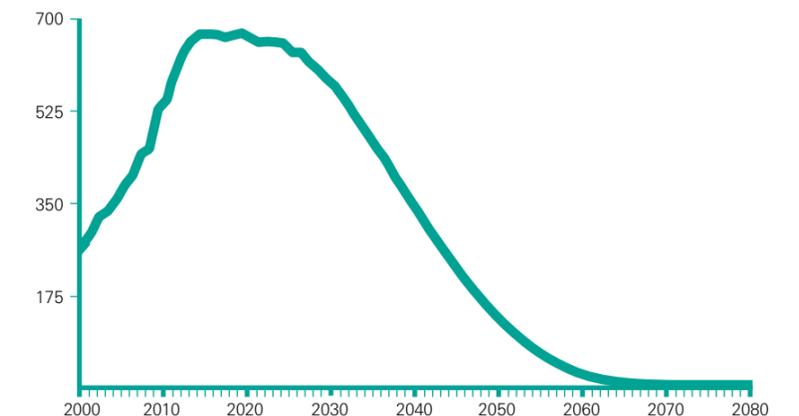
Over the past five years, the University has gone to great lengths to implement the renewal plan; but, in the absence of the resources required to alleviate the budgetary pension burden, the goals of the plan cannot be fully realized. Realization of these goals is contingent upon two factors: the achievement of a balanced budget for regular activities, and arriving at a sustainable long-term solution to the pensions problem.

The University is continuing to work closely with the PBC and the Ministry of Finance to alleviate its actuarial burden and consequent budgetary limitations, and to promote sustained growth and development – enabling the Hebrew University to excel and maintain its rightful place amongst the leading institutions of higher education worldwide.

Relative weight of the budgetary pensions within the operating budget



Past and future pension payments (in millions of Shekels)



Research & Development TODAY'S RESEARCH, TOMORROW'S INNOVATIONS

Academic excellence is the essence of a leading university. It is reflected in outstanding scientific achievements, in the quest for knowledge, and in asking questions and seeking answers about the world around us. The strength of a major academic institution lies, *inter alia*, in its ability to provide top individual researchers and research teams the scientific infrastructure and academic freedom to realize their potential.



MEET A NEW RECRUIT: DR. DANA SHAHAF

Rachel and Selim Benin School of Computer Science and Engineering at the Hebrew University

Dr. Dafna Shahaf was recently named assistant professor in the The Rachel and Selim Benin School of Computer Science and Engineering. Dr. Shahaf designs algorithms that read large amounts of text data, identify the underlying structure of complex topics, and connect the dots between pieces of information, resulting in useful analyses. Her recent work includes an algorithm that retrieves information and automatically creates a "metro map" for widely-covered news stories, scientific and legal documents, and even complex books.

She returned to Israel following postdoctoral fellowships at Microsoft Research and Stanford University. In 2015, she won grants from Yahoo Labs and the Council for Higher Education.

The Steps to Success:

Recruit the Best Talent

Among new faculty members are some of the most promising scientists as demonstrated in the prestigious grants and awards they have received.

Goal: Recruit 550 Researchers by 2020

Build and Renew Infrastructure

The University continues to invest in state-of-the-art laboratories and facilities to ensure the highest level of research. We are committed to providing the necessary physical and organizational infrastructure, equipment, and services to enable our researchers to remain at the forefront of science.

Grow Our Multi-Disciplinary Research

Our world is growing more complex and many of the scientific breakthroughs of the last few years are the result of combining different fields of research, such as nanoscience and bioengineering. The University is building research centers that bring together research professionals from diverse fields who can offer the benefit of varied scientific approaches to their joint research.

Support and Identify Prestigious Funding

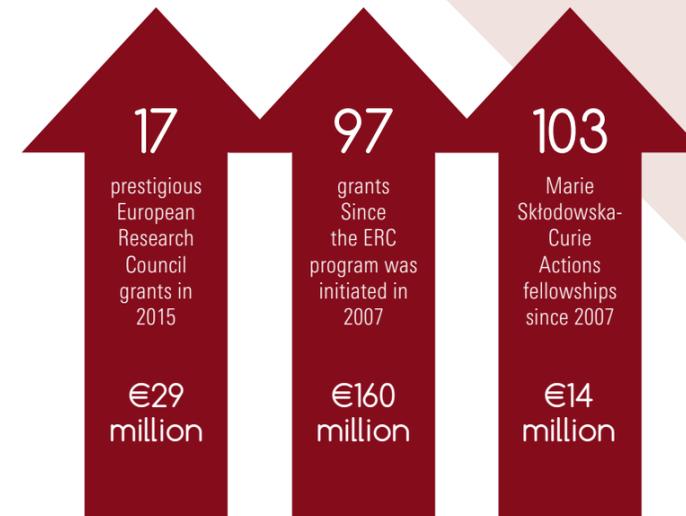
The Authority for Research and Development at the Hebrew University works continuously to provide information and resources to our researchers. These include assisting in identifying new funding sources, submitting grant proposals, submitting financial and scientific reports to national and international funding agencies, and offering information sessions to guide researchers.

SCIENTIFIC RESEARCH GETS A BOOST

\$30 Million for Brain Sciences

The Edmond J. Safra Philanthropic Foundation gifts \$30 mil (\$50 mil total) to continue development of the Edmond and Lily Safra Center for Brain Sciences.

ELSC is revolutionizing neuroscience research with a cutting edge interdisciplinary team of top scientists who are exploring the relationships between gene function, brain neuronal circuits and behavior.



International Research Collaborations

University Partnerships

Study Abroad Programs

INTERNATIONALIZATION

Internationalization is important to the vision of the University and a top institutional priority. Collaborations-both in research and education-are necessary for fostering scientific exchange and cultural growth. The University seeks to be part of the process of globalization of higher education, to improve our academic excellence, to pursue new research funding opportunities and to maintain our global competitive edge.

NORTH AMERICA

United States

Pioneering a Partnership: The Global Center for Transformative Nanomedicine

The Hebrew University and the Cleveland Clinic have launched \$15 million initiative to develop a global virtual Center for Transformative Nanomedicine. The unprecedented research collaboration between the two powerhouse institutions will harness the power of nanoscience and nanotechnology with the goal of revolutionizing the delivery of new therapies and treatments.

Canada

\$6 Million for Stem Cell and Genetic Research

The Azrieli Foundation, donated \$6 million to fund innovative research at the Hebrew University of Jerusalem's newly inaugurated Azrieli Center for Stem Cells and Genetic Research.

EUROPE

The Hebrew University partnered with over 40 leading European universities within the framework of the new European Union Erasmus+ International Credit Mobility Program. Erasmus+ International funds short term student and staff mobility between European and partner countries on the basis of inter-institutional agreements.

ASIA

China The China Scholarship Council has teamed up with the Hebrew University to provide scholarships for 20 selected PhD students, postdocs, and visiting scholars from Chinese institutions each year. The scholarship is available for all academic fields.

Singapore The Hebrew University signed agreements with The National University of Singapore and Nanyang Technological University to collaborate on research and educational activities of mutual interest. Additionally, HU and Singapore's National Research Foundation agreed to create an innovation center within Singapore – The Singapore-Hebrew University Alliance for Research and Enterprise (SHARE) – which will advance and strengthen research collaborations between the countries, and serve as a hub for research, scholarship, entrepreneurship, and postgraduate and postdoctoral training.

AFRICA

Pears West Africa Alumni Regional Conference

Alumni of the Hebrew University's International Masters of Public Health program joined health systems experts at leading Nigerian University, Obafemi Awolowo to discuss infectious diseases, and mechanisms to make them non-communicable. Twenty-two IMPH alumni participated from Cameroon, Cote d'Ivoire, Ghana, Mali, Senegal, and Nigeria.

The DragonFly: 3D Printer

Hebrew University's technology transfer company, Yisum collaborated with the Israeli Company, Nano Dimension to develop the first 3D printer of printed circuit boards, the heart of any electronic device. Prof. Shlomo Magdassi, Professor of Chemistry, at the Casali Center for Applied Chemistry, the Institute of Chemistry and the Center for Nanoscience and Nanotechnology, is a pioneer of nanoscience and nanotechnology who developed the basis for the nano-ink technology.



FUN FACT

The nano ink is an excellent green option as it's the first ink to generate non-hazardous waste as many of the chemicals and waste materials associated with traditional PCB production are eliminated.

HU LAUNCHES FIRST 3D CENTER AND FUNCTIONAL PRINTING CENTER IN ISRAEL

Prof. Magdassi is leading the interdisciplinary hub which will allow researchers from chemistry, physics, medicine and agriculture to experiment with the ever-expanding technology of 3D printing, enabling the formation of ground-breaking structural formations such as printed robots, plastic solar cells, military and medical equipment, smart windows, light detectors and radiation, sophisticated drug pills, and even one day-human organs.



New Device Shortens Chest-Tube Insertion from Minutes to Seconds

After a wave of stabbing attacks in 2015 that left injured civilians with collapsed lungs, members of HU's BioDesign Medical Innovation program responded to this real-life challenge with a life-saving invention.

The practiced procedure to treat collapsed lungs is laborious and difficult, often leading first responders to operate only partially in favor of rapid evacuation from the scene to the hospital.

Fellows in the BioDesign program, a joint effort between The Hebrew University of Jerusalem and Hadassah Medical Center confronted this problem by developing ThoraXS.

ThoraXS is a one-handed thoracic portal opener that shortens the procedure time of chest-tube insertion from a protracted 10 minutes to less than 30 seconds. The multi-disciplinary, team-based approach to medical innovation employed by BioDesign is sponsored by Boston Scientific and the Terumo Medical Corporation and includes fellows from the fields of medicine, bioengineering, and business administration.

BREAKTHROUGH INNOVATIONS

The Hebrew University believes that we have a responsibility to use our prolific research to benefit society. Through our technology transfer company, Yisum, and our BioDesign program we are dedicated to transforming scientific exploration into technologies that have practical applications. BioDesign is a multi-disciplinary student-based team approach to medical innovation.



Seymour Fox
School of Education

PLANTING THE SEEDS OF THE FUTURE

A Tribute to
Prof. Seymour Fox

The School of Education of the Hebrew University of Jerusalem was renamed the Seymour Fox School of Education in recognition of the defining influence of the late Prof. Seymour Fox on the school, educational policy in Israel, and Jewish education in Israel and the United States. The University also announced the creation of the Fox Family Chair for Teacher Education in his honor, which was added to the recently established Morton L. Mandel Directorship of the Seymour Fox School of Education and the Marc Besen Family Chair.

Early in his career, Fox identified secondary and higher education as the keys to breaking down social barriers in Israeli society. With a unique entrepreneurial spirit, Fox enlisted the Ministry of Education and the Hebrew University to his cause and undertook the challenge to improve Israel's education system.

Under his 14 years of leadership, thousands of students graduated from the School of Education and went on to become researchers and professionals in the field. Hundreds of secondary-school teachers were trained, and several institutes were established.

Fox passed away in 2006, at the age of 77. At his tribute 10 years later, Fox was remembered as "larger than life." His influence on Jewish education around the world has been called "inestimable." Looking forward to 2020, Seymour Fox's legacy will continue to inspire the School of Education in bringing theory into reality, and preserving the school's role as a catalyst for social change.



THE HEBREW UNIVERSITY IN JERUSALEM

The Hebrew University is inseparable from the community in Jerusalem. We are committed to social action and embrace our role to improve the city by creating educational opportunities for its heterogeneous cultural and economic populations.

Diversity That Works

For many years the Hebrew University has concentrated efforts to welcome and recruit students from vulnerable and diverse populations, reflecting diverse population of Jerusalem.

The Unit for Equal Opportunities - Excellence and Diversity has substantially increased programs like summer courses in English, academic study groups, and academic tutors which prevent dropout, and guarantee success for students from minority groups.



Fostering Economic Development in Jerusalem

HUstart, the Entrepreneurship Center of the Hebrew University, opened in late 2015, is the result of collaborations between the Faculty of Science, the School of Business Administration, the Asper Center for Entrepreneurship, the Alexander Grass Center for Bioengineering, and the Yissum Research Development Company. The center provides practical education, mentorships and connections needed for HUJI students and Jerusalem community members to become effective entrepreneurs.

HUstart The Hebrew University
Entrepreneurship
Center

Edit Doron

Professor, Department of Linguistics and at the Language, Logic and Cognition Center, Co-director, HUJI-TAU Linguistics Structured PhD Program

Israel Prize for her work in the study of Linguistics. Doron was recognized for being at the forefront of linguistics research in Israel and the world, both in general and in formal linguistics, as well as in Hebrew and Semitic languages. (2016)

David Shulman

Renee Lang Professor of Humanistic Studies

Israel Prize for his work in Religious Studies and Philosophy. Shulman was recognized for his breakthrough studies on the religion, literature, and culture of southern India. (2016)

Yohanan Friedmann

Max Schloessinger Professor Emeritus of Islamic Studies

Israel Prize for Near East Studies. Friedman was recognized for his revolutionary research of Islam in the Indian subcontinent, Islamic philosophy and law, and Islamic religious tolerance and coercion. (2016)
Rothschild Prize in Humanities. Recognized for his contribution to Islamic and Arabic studies. (2016)

Dani Zamir

Professor, Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture

EMET Prize for Life Sciences, Agriculture. Zamir was recognized for his groundbreaking research of the genetic control of complex quantitative traits and the application of his studies to plant breeding. (2015)

Morris (Moshe) Soller

Professor Emeritus of Applied Genetics

EMET Prize for Life Sciences, Agriculture. Soller was recognized for his unique research integrating statistical genetics with biochemistry and molecular biology and for the application of his theories in enhancing genetic breeding of poultry and cattle. (2015)

Daniel Rosenfeld

Professor, the Fredy and Nadine Herrmann Institute of Earth Science

EMET Prize for Exact Sciences, Earth Science. Rosenfeld was recognized for his leading research in the field of cloud and rain physics and on the effect of natural and man-made aerosols on rainfall levels and distribution. (2015)

Robert Benny Gerber

Saerree K. and Louis P. Fiedler Chair in the Institute of Chemistry

Foreign Honorary Member of the American Academy of Arts and Sciences (2016)

Sergiu Hart

Alice Kusieli and Kurt Vorreuter Professor of Economics and Mathematics, Founding Director of the Federmann Center for the Study of Rationality

Foreign Honorary Member of the American Academy of Arts and Sciences (2016)

Menachem Magidor

Professor Emeritus of Mathematics in the Einstein Institute of Mathematics, Former University President

Foreign Honorary Member of the American Academy of Arts and Sciences (2016)

Zeev Sternhell

Leon Blum Professor Emeritus of Political Science

Foreign Honorary Member of the American Academy of Arts and Sciences (2016)

Hagai Bergman

Simone and Bernard Guttman Professor of Brain Research, Founding Member of the Hebrew University Inter-Disciplinary Center for Neural Computation and the Edmond and Lily Safra Center for Brain Sciences

Rothschild Prize in Life Sciences. He was recognized for his neurological research about basal ganglia and Parkinson's disease. (2016)

Nathan Linial

Professor, Rachel and Selim Benin School of Computer Science and Engineering

Rothschild Prize in Mathematics / Computer Sciences and Engineering. He was recognized for his contribution to interdisciplinary research between Mathematics, Computer Science and the Natural Sciences. (2016)



IN RECOGNITION
OF EXCELLENCE

HEADLINE HIGHLIGHTS

Einstein Archives display rare documents including a handwritten page from Einstein's original Theory of Relativity.

King Hezekiah's Royal Seal Discovered in Ophel Excavations.

New innovative blood test detects degenerative diseases including diabetes, MS, and pancreatic cancer.

Members from Hebrew University, Germany, the US, Brazil, and China employ satellite technology to measure human impact on climate change.

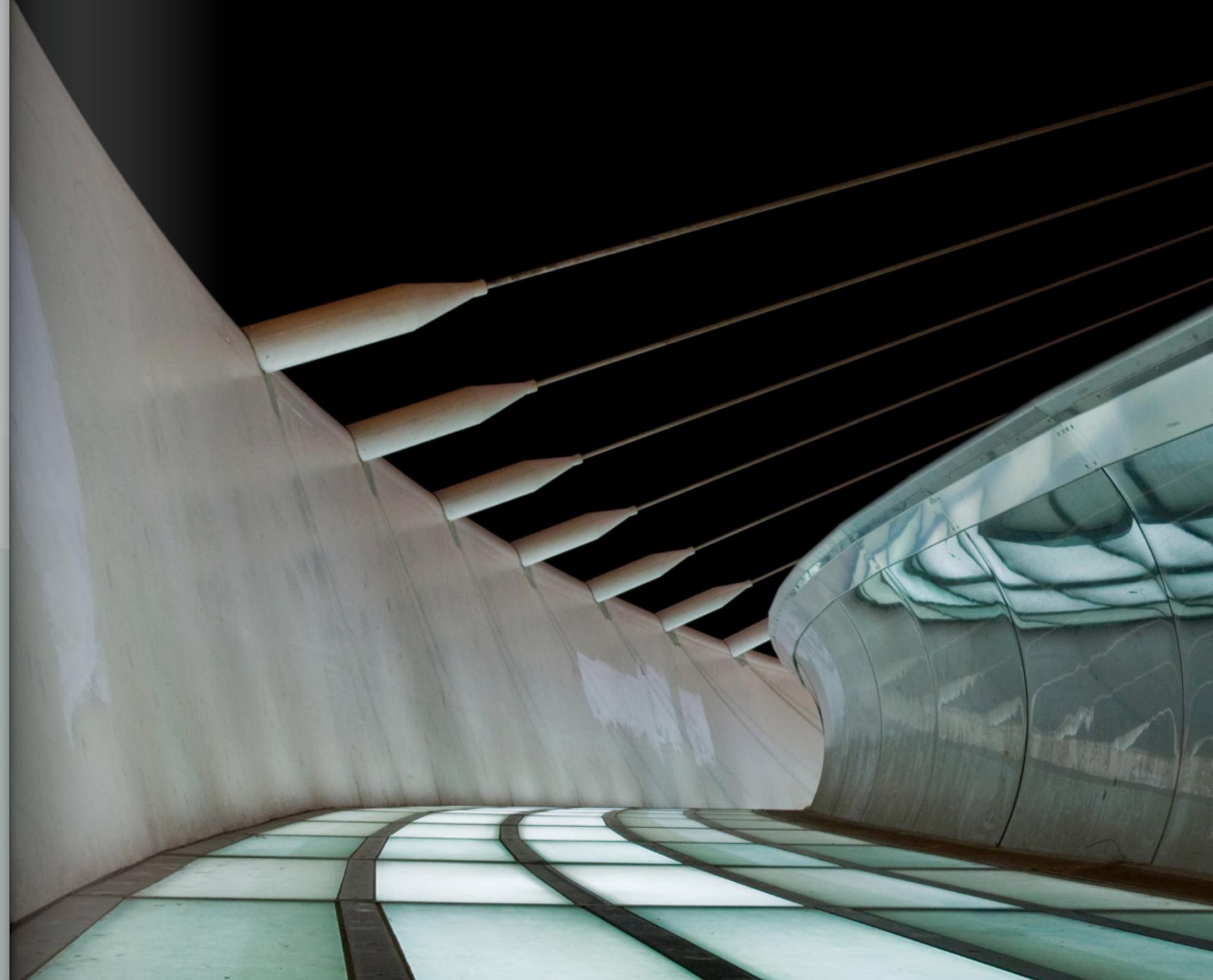
Award-winning agricultural discovery increases yield and nutritional quality of sesame seeds to put a dent in global malnutrition.

New haploid stem cell is a gateway to cures for conditions ranging from blindness to diabetes.

Faculty of Medicine and Computational Neuropsychiatry Lab develop algorithm that can put exact measurements on brain computation.

Prehistoric Village discovered in the Jordan Valley said to be dated back 12,000 years.

Hebrew University and the Fraunhofer Institute for Secure Information Technology launch Joint Global Cybersecurity Center in Jerusalem.



Hebrew University at a Glance

Technology Transfer

52 Years of transferring technologies
9,325 Patents
2,625 Inventions (165/year)
880 Licenses
110 Spin-off companies

Rankings

No. 1 in Israel
No. 67 Worldwide (up 3 from last year)
No. 33 Mathematics
No. 51-75 Economics/Business

Awards and Excellence

287 Israel Prizes
96 Rothschild Prizes
42 EMET Prizes
14 Wolf Prizes
8 Nobel Prizes
1 Fields Medal in Mathematics
1 Canada Gairdner International Award
1 Turing Award in Computer Science

Research

>100 Research centers
3,600 Research projects
5 Affiliated hospitals
>1/3 of PhD students in Israel
43% of Israel's biotechnology research
30% of all Israeli academic research

We Are

6 Campuses
7 Faculties
6 Schools
315 Departments
973 Faculty members
23,500 Students