PRIORITY PROJECTS
MAY 2014

INVESTING IN A BETTER FUTURE
**Priority Projects**

**2014**

The University of Haifa is a dynamic institution, fully committed to strengthening Israeli society through the pursuit of research and teaching at the highest international levels of excellence. As the largest comprehensive research university in the country’s northern region and home to a community of students that most accurately mirrors Israeli society, the University is a major catalyst for growth and prosperity in northern Israel. The Division of External Relations and Resource Development works closely with the President and Rector to identify priority projects that will make an immediate and significant impact on the lives of our students and establish new centers of research excellence.

**Mediterranean Sea Research**

The University of Haifa is proud to be a national center of excellence in the field of marine sciences. Home to the Leon H. Charney School of Marine Sciences, the Recanati Institute for Maritime Studies, and the Helmsley Charitable Trust Mediterranean Sea Research Center, the University of Haifa is playing a critical role in exploring, preserving and harnessing the power of the Mediterranean Sea for the benefit of Israel and our regional neighbors. The University of Haifa is also proud to have been chosen by the Israeli government to lead The Mediterranean Sea Research Center of Israel. The Center’s mission is to advance the sustainable development of Israel’s most strategic resource and leverage global leadership in marine science research.

Combining cutting-edge research with an enthusiastic and innovative scientific team, our activities will address an unprecedented array of scientific, technological, economic, security, and environmental challenges and opportunities. With an acute shortage of qualified local experts trained to address this demanding new landscape, our academic programs are also educating a new generation of scientists and researchers.

- Gifts ranging from $25,000 to $100,000 will provide critical scholarship support for MSc, PhD and Postdoc students at the Leon H. Charney School of Marine Sciences.
- A gift of $1 million will enable the University to recruit a new faculty member for a period of five years.
- A gift of $3.5 million will enable the University to purchase high-performance, state-of-the-art, marine science research equipment (such as a deep-sea ROV and AUV explorers).
RETURNING SCIENTISTS PROGRAM

The University of Haifa has embarked on an ambitious campaign to support innovative science research in areas where we have a proven record of success or leadership and in fields where we strive to position ourselves as centers of excellence. Over the next five years, we plan to recruit an additional 100 researchers who will continue to contribute to the University’s heightened international profile in scientific research and to its high standards of excellence and innovation. Areas of research include: Cancer, Alzheimer’s and Parkinson’s disease.

To support this important strategic goal and provide optimal conditions for our talented researchers, the University plans to construct additional state-of-the-art laboratories and research facilities. Setting up wet and dry laboratories for these researchers includes purchase of specialized equipment, retrofitting facilities to meet individualized research needs, and providing research staff, including graduate and doctoral students, and postdoctoral fellows.

- A gift of $250,000 will enable the University to name a laboratory in the donor’s honor.
- A gift of $500,000 will name a fully-equipped science laboratory.
- A gift of $1 million will support a returning scientist for a period of five years and provide laboratory facilities.

HIGH-PERFORMANCE COMPUTING FOR SCIENCE RESEARCH

With many young researchers and returning scientists leading newly established laboratories at the Faculty of Natural Sciences, a common need has emerged for a general-purpose, high-performance computing (HPC) system.

Presently, there are 24 research groups at the University that have HPC needs, but no in-house access to such resources. Therefore, current research relies on outsourcing or on academic collaborations to perform advanced scientific computations. Outsourcing is an inefficient use of research funds and external academic partners are often given limited computational resources and low-priority scheduling, resulting in delays and unjustifiably reducing the role of University of Haifa scientists in such research projects. A shared faculty HPC infrastructure at the University will provide a much-needed general solution for the numerous research groups involved in big-data and complex-systems sciences.

- A gift of $600,000 will secure the necessary infrastructure to match the current needs of the young researchers and will pave the way for future discoveries.
**Wild Cereals Gene Bank Project**

Our researchers are using new technologies to discover strains of wheat and barley that are highly resistant to disease, tolerant to drought and salinity, and offer high grain quality. The introduction of these hardier genes into current commercial varieties can result in a huge impact on global food production. Improving grain protein content of wheat will affect the lives of more than 2 billion people suffering from malnutrition. Moreover, increasing grain mineral content will provide one solution to poor populations suffering from a wide spectrum of diseases and developmental problems caused by mineral deficiencies.

The Gene Bank's facilities will include: construction of two Storage Facilities; a Seed Processing and Research Laboratory; and two Greenhouses. The greenhouses will include a computerized irrigation system, electricity, and large ventilators, and will be used both for seeds multiplication of the gene bank collection and for research purposes.

➤ A gift of $2 million will enable the University to name the Project in the donor's honor.

**Alzheimer’s Research**

Researchers at the University of Haifa have recently identified a promising medical intervention that could potentially render Alzheimer's disease a thing of the past.

Shifting the research focus from treating unhealthy brains to identifying the molecular and chemical properties of healthy brains, our researchers have uncovered an important clue that is yielding positive results in laboratory tests. By selectively manipulating brain cells at the molecular level, University researchers have successfully controlled the production of a specific protein that plays a key role in maintaining brain plasticity and consequently in memory consolidation in healthy brains.

Revealing this basic biological mechanism sheds light on many processes and diseases, such as cancer, brain disease and cognitive deterioration with age. The research group is now poised to extend these research efforts and test new, pharmacological and genetic tools with the aim of producing new and powerful cognitive enhancers.

➤ A gift of $2 million will enable the University to name the research in the donor's honor.
CANCER RESEARCH

THE SPALAX BIO-MEDICAL RESEARCH PROJECT

Researchers at the University of Haifa have discovered an original new trajectory in the field of cancer research that is drawing world-wide attention in the scientific community. Extensive biological studies have established that the Spalax, or subterranean blind mole rat, possesses a unique molecular biology that suppresses the growth of cancer cells.

During 20 years of research activities, there have been no documented cases of spontaneous cancer growth in these animals. This remarkable defense ability, which is not found in mice and other above-ground rodents, may hold the key to inhibiting or destroying various cancers at the cellular level. Continued research in this promising field could, ultimately, produce treatments that fight cancer and vascular diseases.

- Gifts ranging from $75,000 to $150,000 will provide support for ongoing research.
- A gift of $2 million will enable the University to name the research in the donor's honor.

THE LABORATORY OF TUMOR DORMANCY AND METASTASIS

Breast cancer remains the most common malignant disease and the second leading cause of cancer deaths among western women. Early diagnosis of breast cancer disease increases the chances of a disease-free survival of breast cancer patients. However, breast cancer can recur locally or develop secondary tumors in other organs – years and even decades after the initial treatments. Metastasis, the spread of tumor cells and growth at secondary sites, is the major cause of mortality of breast cancer patients.

The Laboratory of Tumor Dormancy and Metastasis is pursuing the molecular mechanisms underlying tumor dormancy and the emergence to metastatic growth. Dr. Dalit Barkan’s findings have the potential to identify novel targets to fight metastatic growth and to eventually lead to the development of treatment that will prevent recurrence and metastatic growth in breast cancer and other cancers.

- A gift of $1 million will enable the University to name the laboratory in the donor's honor.
**Brain Research – BioMap Research Center**

An estimated 26% of Americans over the age of 18 suffer from a diagnosable mental disorder in a given year. With nearly one in four adults affected by mental disorders, mental illness is increasingly becoming recognized as a major cause of disability and suffering and a growing global concern.

Researchers at the University of Haifa are beginning to unravel the complex biological mechanisms that underlie human behavior and our responses to traumatic events. Studies have pointed to the necessity of taking multiple biomarkers into account to gain a fuller, more accurate picture of the patient. Research findings will be used to improve the accuracy of diagnosis and treatment of individuals with psychiatric disorders, and to develop new drugs and treatments to ease the suffering of those affected by these devastating illnesses. Our interdisciplinary approach includes experts from behavioral neuroscience, system neuroscience, neuro-endocrinology, neuro-immunology, molecular neurobiology, neuropsychology, psychiatry, mathematics, pattern analysis and bioinformatics.

- A gift of $2 million will enable the University to name the Center in the donor’s honor.

**Cyber Security Laboratory**

With each passing day, we encounter more media stories that describe a thriving underworld of hackers and the disclosure of highly sensitive, classified information. Recent cyber attacks against Israeli ministry offices, postal services and transportation networks have made this issue a national priority.

In light of this growing urgency, the Department of Computer Science at the University of Haifa is intensifying its cyber security research activities. Dr. Orr Dunkelman and Dr. Rita Osadchi of the Faculty of Computer Science were recently awarded a research grant as part of the National Cyber Project to protect biometric information, such as fingerprints. This research is extremely important, given the national plan to compile a biometric database of the entire population.

- Gifts ranging from $25,000 to $100,000 per year will provide support for ongoing research, academic activities, and student scholarships.
- A gift of $250,000 will dedicate the Cyber Security Laboratory in the donor’s name.
HEALTH SCIENCES COMPLEX

In the last two decades alone, Israel has absorbed thousands of immigrants with unique healthcare needs, faced precarious economic conditions that have affected healthcare provision and budgets, and endured turmoil that has taken a heavy toll on the physical and mental welfare of individuals and entire communities. The University of Haifa is committed to addressing these acute and pressing health challenges and stands at the forefront of strengthening health research, education and policy.

To enable our researchers to expand their academic and research programs, the University of Haifa is proposing to build a new Health Sciences Building. The 5,300 square meter building, to be located at the entrance to the campus, will house state-of-the-art research activities that are directed at gaining a deeper understanding of growing health concerns and improving quality of life for individuals with Autism, Post-Traumatic Stress Disorder, Alzheimer's and Parkinson's diseases.

- A gift of $2 million will dedicate a wing within the building in the donor’s honor or in the name of a loved one.
- A gift of $7 million will enable the University of Haifa to dedicate The Health Sciences Building in your honor or in the name of a loved one.

THE FACULTY OF LAW BUILDING

The Faculty of Law believes that law can be a vehicle for social change, and that future lawyers educated at the University should make a positive contribution to Israeli society.

The Faculty of Law is among the fastest growing departments at the University of Haifa. To meet the rapidly expanding needs of our more than 1,000 students and faculty, plans are underway to build a new state-of-the-art facility. The new Faculty of Law Building will be a 2,700-square-meter facility east of the Jacobs Building that will house the Faculty's numerous research centers, legal clinics, international programs, Judges Academy, lecture halls, classrooms and offices.

- A gift of $10 million will dedicate the new Faculty of Law building in the donor's honor or in the name of a loved one.
**Computerized Classrooms**

The University of Haifa prides itself on making higher education accessible to all students from a wide range of socioeconomic backgrounds, and not all of our students have regular access to computers at home. In an effort to bridge the 'digital divide', the University places a priority on providing all students with equal access to updated computer equipment and high speed Internet classrooms around the campus.

The University is currently renovating two computer classrooms, each with dozens of personal computers. These computer classrooms are heavily used by students and require regular maintenance, including software and hardware upgrades.

- A gift of $100,000 will enable the University to renovate and upgrade one computer classroom.

**The "Knowledge Is Power Program" - KIPP**

The University of Haifa, in partnership with the Israeli Ministry of Education and the Leo Baeck Education Center, is proud to have launched the first school in Israel based on the pioneering Knowledge Is Power Program (KIPP). The program is designed to help students from at-risk demographic communities to develop the knowledge, skills, and character traits needed to succeed in colleges, and in their careers beyond.

Researchers from the University are developing a comprehensive evaluation plan, establishing baseline data, gathering evidence, and adjusting the educational program and teacher training offerings based on lessons learned. The evaluation feedback loop is what sets this initiative apart from other educational change projects and why the Ministry of Education has designated the University of Haifa as the sole university providing these academic, pedagogic and evaluation services to the KIPP Israel network.

- A gift of $500,000 will fund the 3-year pilot phase of the KIPP intervention project.
- A gift of $2 million will enable the University to name the KIPP-Inspired Educational Research Center in the donor's honor.
The Faculty of Law offers an array of social action programs, including eight Legal Clinics for Social Change. The Legal Clinics are part of an innovative academic program that engages law students in promoting positive social change through the establishment of legal precedents, legislative change and amendments, and advocacy with public authorities. Individual cases are carefully chosen by the Clinics’ staff based on potential impact, to either fill a legal vacuum or to advocate for change that will benefit the disenfranchised, the vulnerable, and the disempowered.

Through the work of the Legal Clinics, law students are exposed to examples of social injustice and provided with hands-on opportunities for corrective intervention. The diverse nature of the University’s faculty and student body allows Jewish and Arab students unique opportunities to collaborate and work with multi-ethnic communities.

- An annual gift of $50,000 per clinic will enable the Clinics for Social Change to continue their legal advocacy activities.
INTERNATIONAL MA PROGRAMS

ISRAEL STUDIES

The Israel Studies program is designed for students who wish to broaden and deepen their understanding of Israeli history and society, and situate the Zionist movement and the establishment of the State of Israel against the larger backdrop of twentieth-century Jewish history, Middle Eastern politics and society. The ultimate goal of the program is to provide students with a rich academic and cultural experience and create goodwill ambassadors who will strengthen ties between Israel and countries around the world.

Our unique campus demographics make the University of Haifa the perfect place to explore the history of the State of Israel, Israeli society and the Jewish Diaspora. The campus is a living laboratory where Jews, Muslims, Christians, Druze, Bedouin and Bahá’ís study side by side. In this setting, international students experience the relevant, and oftentimes contentious, issues of a multicultural society.

- A gift of $500,000 will establish a dedicated scholarship fund.
- A gift of $1 million will enable the University to name the International MA Program in Israel Studies in your honor.

CREATIVE ARTS THERAPIES

The Graduate School of Creative Arts Therapies offers the only program in Israel that awards a master's degree in Creative Arts Therapies with the following five specialization tracks: Art Therapy, Dance Movement Therapy, Music Therapy, Drama Therapy, and Psychodrama. The School has become one of the most popular offerings at the University, with over 400 students currently enrolled.

Art therapists use their knowledge about human development, psychological theories, clinical practice, and artistic creation to offer effective treatment for those who suffer from physical disabilities, trauma, neurological illnesses, and clients in at-risk situations.

- A gift of $250,000 will establish a dedicated scholarship fund in the name of the donor.
- A gift of $500,000 will enable the University to name the International MA Program in Creative Arts Therapies in your honor.
SCHOLARSHIPS AND ENDOWMENTS

In keeping with its commitment to providing education to the best and the brightest, regardless of their economic status, the University of Haifa provides scholarship assistance to more than one-third of its students. Each year, the University grants more than $7 million in tuition assistance, helping to support the academic and professional dreams of talented and committed students from the full spectrum of Israeli society.

Dedicated, merit-based scholarships enable the University to attract the most promising students and to recognize academic excellence. Need-based scholarships target students with financial difficulties and afford them the opportunity for higher education.

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About the University of Haifa

The University of Haifa is the largest comprehensive research university in Israel's northern region and academic home to a community of students that most accurately mirrors Israeli society. It enrolls the largest number of military and security personnel, who study alongside civilians from all walks of life - Haredi and secular Jews, new immigrants, Arabs, and Druze.

The University's mission is to cultivate academic excellence, create a shared Israeli experience, and promote democratic values in an environment of tolerance and multiculturalism. It is such an environment that contributes to outstanding research and a community of exceptional, creative, and productive alumni. We believe that fostering outstanding research while strengthening Israel’s northern region and promoting an environment of multiculturalism is of strategic importance for the continued existence and prosperity of the State of Israel.

The University of Haifa stands atop Mount Carmel, where Haifa’s southern boundary verges on the Carmel National Park. Over 18,000 students study here for undergraduate, graduate, and doctoral degrees. The University of Haifa is fully committed to academic excellence, which is expressed in its many and diverse interdisciplinary and international programs and collaborations with academic institutions around the world. The University of Haifa has gained an international reputation in many research areas, and is Israel’s leading university in the humanities, education, social sciences and marine research.

Contact Information

Office of the Vice President of Resource Development and External Relations
Tel: +972-4-824-0093
vice-president@univ.haifa.ac.il
www.haifa.ac.il