At the heart of technology and tradition

Bar-Ilan University 2010 President's Report

This is a very exciting time at BIU. We invite you to join us in making tomorrow happen today.
These are exciting times for Bar-Ilan University. We have declared our mission – to “be the best” – and are well on the road to achieving this lofty goal. As the University surges ahead toward the second decade of the 21st century, I am proud to share with you how we plan to solidify and enhance our reputation as an outstanding university that has its eye on excellence while building a world-class research infrastructure.

“Being the Best” – Our Mission

We aim to be the “Best in Science” – to nurture and recruit the most talented community of researchers in all fields of endeavor. How? As part of a national program to combat Israel’s brain drain, Bar-Ilan has taken the lead by committing to absorb 50 returning scientists – half of the total number of Israeli researchers set to be taken on board by all Israeli research institutions. We have already absorbed nearly half of them, and are on target for the balance.

And I am especially proud to announce that our university was chosen to be the home of Israel’s fifth School of Medicine, to be situated in the north of the country. You can read about our plans for BIU’s new Faculty of Medicine in the pages within this report.

Our mission is to become the “Best in Academic Excellence” – the meeting place of the Jewish nation, attracting the best and brightest of students from Israel and around the world. How? Our brand-new state-of-the-art Engineering School Complex, Leslie and Susan Gonda (Goldschmied) Multidisciplinary Brain Research Center, Leslie and Susan Gonda (Goldschmied) Nanotechnology Triplex and Mina and Everard Goodman Faculty of Life Sciences house some of the most brilliant minds in the country and are magnets for superior students.

We will strive to be the “Best in Jewish Enrichment” – providing a powerful Jewish and Zionist experience along with scientific excellence. How? Through special endeavors such as the Jesselson Institute for Advanced Torah Studies’ groundbreaking Reshit Program for shared Torah learning, and BIU’s one-of-a-kind Basic Jewish Studies Program – required studies for all students.

We will become the “Best in Community Service” – the most influential and socially committed institution of higher education in the State of Israel. How? By our special emphasis on helping others through required Legal Clinics, free Optometry services, and an open-to-the-public Psychology clinic.

We intend to excel in these areas and more in the next decade and beyond. We invite you to join us as friends and partners in our noble mission to “be the best.”

Prof. Moshe Kaveh
President
HERE COMES THE SUN

“BIU has the brains, facilities and management to play a leading role in solving today’s energy problems,” says Prof. Arie Zaban

“Energy is one of today’s biggest global problems,” says Prof. Arie Zaban, Director of the Bar-Ilan Institute of Nanotechnology and Advanced Materials (BINA). “An energy shortage can have very severe consequences on our ability to live on this planet.” And Zaban, whose nanotechnology inventions have been cited in prestigious journals such as Langmuir, Applied Physics A, and the Journal of the American Chemical Society, is doing his utmost to provide the world with economically viable alternative energy solutions.

Energy has been at the top of Bar-Ilan’s agenda for some time, with research groups working on numerous projects such as renewable energy, energy management, energy saving, and energy storage, along with nano-based solutions for energy-related dilemmas.

Zaban’s research team recently developed a new method for creating tiny solar cells that produce electricity at a level of efficiency similar to conventional, silicon-based cells – but at a much lower cost. Given their small size, the cells can be placed nearly anywhere including on windows, on roofs or even in bags. An Israeli start-up company is partnering with Bar-Ilan to develop the technology for commercial use, and Zaban is serving as an advisor.

The drive toward developing viable alternative energy solutions – combined with nanotechnology expertise – is what makes Zaban and his nano-energy team stand out. “We’re in a great position to consolidate our leadership role in nanotechnology and energy research, and are investing much effort and money in getting the best researchers, and equipping them with the best possible infrastructure,” he says. “The key to success is having brains, facilities and management. We have them all.”

A former combat pilot in the elite Israeli Air Force, Zaban is clear about what helps Bar-Ilan stand out. “As was the case with members of my air force unit, my colleagues at Bar-Ilan are what make the difference,” he says. “They have no fear, and we encourage them to enter today’s most daring and exciting areas of research.”

Zaban believes that Bar-Ilan’s dynamic and growing environment gives experimentalists the chance to pursue all avenues of research. “The University provides us with a positive environment, support and encouragement, and wonderful friends and colleagues,” he says. “Nanotechnology is the most exciting thing happening in science right now, and we at Bar-Ilan are ideally positioned to change the world.”

PROF. ARIE ZABAN
Director, Bar-Ilan Institute of Nanotechnology and Advanced Materials (BINA)
BAR-ILAN’S NANOTECHNOLOGY INITIATIVE

Bar-Ilan is world-renowned for its nanotechnology research. The University is:

• Dedicating the state-of-the-art Leslie and Susan Gonda (Goldschmied) Nanotechnology Triplex, which will house the Bar-Ilan Nanotechnology and Advanced Materials Institute (BINA)
• Focusing on innovation in medicine, materials, energy, cleantech (environment), computer technology, and photonics (lasers and optics)
• Ranked number one in Israel and third in the world for citations in advanced materials research
• Conducting joint research projects with leading organizations such as Intel, General Motors, Merck, and Yale University

At Bar-Ilan, nano-research has already scored tangible results. A few are:
• Nano-sized particles that seek out and destroy individual cancerous cells
• Low-cost, super-efficient solar energy cells
• Ultra-sensitive sensors that detect even trace amounts of dangerous substances
• Faster, more efficient computer memory chips
• Anti-bacterial bandages and hospital clothing that can be worn for weeks
“Today there are fewer and fewer limits when working on a small scale,” says Prof. Zeev Zalevsky, Director of Bar-Ilan’s state-of-the-art Nanophotonics Center of Excellence. “The smaller the item, the more you can accomplish.”

The ability to clearly see the tiniest of items, however, has restricted technological progress in many important areas such as security and medicine. But nanophotonics – the study of molecule-sized particles and light – is shining a bright light on the future by enabling researchers to see things that were previously invisible. “Nanophotonics is revolutionizing our lives in many areas,” Zalevsky says.

Zalevsky is indeed an expert on these matters – he was awarded the Wolf Foundation’s 2007 Krill Award, the International Commission for Optics’ ICO Prize for 2008, as well as the Ernst Abbe medal for his outstanding work in optical super resolution, and was one of five researcher finalists for the 2009 International Bepi Colombo Prize for transferring innovation into applications.

Underscoring how nanophotonics affects us in multiple ways, Zalevsky – an entrepreneur-turned-academic – divides his research into four areas: spatial processing (the processing of spatial information and functions, such as movement control and mental imagery), silicon photonics (light technology based on silicon chips), in-fiber devices (tiny electronic devices within optical fiber communications systems), and RF photonics (light technology based on radio frequencies). “In spatial processing, for example, we can improve the resolution in imaging systems, helping us to see better,” Zalevsky says, adding that he’s working on a better, lightweight alternative to multi-focal lenses. “And in silicon photonics, a smaller chip means better and faster computer and information processing.”

Zalevsky’s background in the Israeli Air Force, followed by several years in Israeli high-tech start-ups, helps him better appreciate the relationship between academic research and enterprise. “Our center works closely with start-ups to bring our developments to a practical level,” he says. “This, in turn, helps us advance Bar-Ilan’s reputation as an institution concerned with Israel’s commercial and scientific communities.”

Meanwhile, the reputation of Zalevsky’s nanophotonics research is growing each day through the establishment of partnerships with several world-renowned organizations. And as a result, the center, as an integral part of Bar-Ilan’s Nanotechnology Institute, is attracting some of the field’s best researchers. “These world-leading researchers will be able to do really special things here,” Zalevsky says.

Zalevsky, who is on the faculty at Bar-Ilan’s School of Engineering, believes that the current environment in which he is working can make a difference. “Since our school is new and relatively small, we can really make an impact. There’s a pioneering spirit among the faculty, everyone is open to suggestions, and there are great relations between staff, students and teachers,” he says.
PARTNERING FOR THE FUTURE

Given that nanophotonics research has the potential to impact a wide range of industries, Zalevsky and his team have established partnerships with several world-renowned institutions and enterprises. These alliances not only strengthen Bar-Ilan’s reputation in the field, but also enhance the chances that nanophotonics will make a real difference to our lives in the future.

**Research Institutions**
- Sandia National Laboratories
- NIST
- St. Petersburg Institute
- National Institute for the Physics of Matter (INFM)

**Universities**
- Delft University of Technology
- Technion – Israel Institute of Technology
- University of Rochester
- University of Valencia

**Enterprises**
- Accubeat
- LDS

“High-tech brings Israel more than $20 billion annually in exports. This depends solely upon our country’s brainpower – including engineers who receive high quality training at Bar-Ilan.”

Elisha Yanay, Senior Vice President of Motorola Inc.
If any single project at Bar-Ilan embodies the University’s success at integrating tradition and technology, it’s the Responsa Project. Initiated as a means by which to computerize the 3,500 extant volumes of halakhic (Jewish legal) questions and answers (she’elot vetshuvot, or responsa), the Project was launched at Bar-Ilan in 1972. It has since revolutionized Jewish studies by enabling global access to the massive and ancient body of Jewish thought.

The Responsa Project has evolved with technology. It includes state-of-the-art search tools in both Hebrew and Aramaic – the language of much of the Talmud – and a sophisticated (and locally developed) search engine. BIU researchers today are upgrading the cross-linkage of sources throughout the Responsa’s massive database to improve its use, and they are creating a lexicon that defines terms that are no longer in popular use – but were common in the source texts in various periods in history. Future goals for the Project include improving the user interface and search speed.

Underscoring the breadth of scholarship within the Project, which is also known as the Global Jewish Database, Bar-Ilan is continuously adding source material and new functionality to further enhance the value of this unique learning tool.

Digitizing and cross-referencing 3,000 years of Jewish learning – more than 80,000 halakhic rulings and more than 180 million words – for use on any home or laptop computer, Bar-Ilan’s Responsa Project was the subject of the prestigious Israel Prize in Torah Literature in 2002. An essential tool for anyone interested in the development of Jewish law, medicine, customs, language, and traditions, the database – which is available online or on CD-ROM – serves as the official codex of Jewish law for the Knesset and the Israeli Supreme Court.

Now available in its 17th edition, circa 30,000 Responsa CDs are in use worldwide by lawyers, judges, scholars, educators, and laypeople in over 40 countries.

Synthesizing Bar-Ilan’s expertise in Torah literature and computer science, the world’s largest electronic database of Jewish scholarship currently includes about 500 volumes of questions and answers. In addition, the Responsa Project includes several other bodies of work, including the Bible and its main commentaries, the Talmud, the Zohar (the most prominent work of the Kabbalah), and other influential books in the Jewish library.
The whole world is technology-oriented today,” says Bar-Ilan University doctoral candidate Jessie Pincus Ben-Avraham. “And if archaeology doesn’t get on the bandwagon, it will literally be left in the dust.”

Having made aliyah from the US just three years ago, Pincus Ben-Avraham is pursuing a PhD in geoarchaeology – the use of geophysical methods to detect remains below the surface prior to actual excavation. One such method is ground penetrating radar (GPR), an area in which Pincus Ben-Avraham has world-class expertise.

“GPR is a non-invasive way to understand what’s going on in the subsurface, and helps archaeologists decide where to dig,” Pincus Ben-Avraham says. “In one of the largest-ever GPR surveys, which took place at Bar-Ilan’s dig at Tell es-Safi and which was headed by one of my advisors, Prof. Aren Maier, I was able to identify where the dig should be focused. The results saved years of excavation and research costs.”

Pincus Ben-Avraham also has been working extensively with another burgeoning technology – geographical information systems (GIS). “GIS helps us organize multiple layers of geographical data – from climate and topography to weather patterns,” she says. “It’s technology’s answer to the way we strive to understand a place and time.”

While uncovering the past is typically expensive and time-consuming, the adoption of cutting-edge methodologies by Pincus Ben-Avraham and others at Bar-Ilan is changing this dramatically.

“Technology and archaeology are not strange bedfellows at all,” Pincus Ben-Avraham says. “The whole idea is to take existing technology used in other fields and find efficient ways to apply it to our needs. What we are actually doing is expanding the archaeologists’ toolbox and making research cost-effective and results-oriented.”

And her work fits right in with Bar-Ilan’s synthesis of Biblical tradition and commitment to scientific excellence – an approach which is not embraced by much of academia today. “We say, ‘let’s do archaeology the academic way, and see how discoveries and events in the Bible reflect on each other,’” Pincus Ben-Avraham says. “We use the Torah as a valuable source of information.”

Hoping to take her young daughter on dig sites with her as soon as possible, Pincus Ben-Avraham is passionate about her decision to do her PhD at Bar-Ilan. “BIU’s commitment to the Jewish sources and the latest technology make it the place to ‘do’ archaeology,” she says. “Israel is the center of the world, home to a huge number of civilizations – including our own. And it’s all right here, just under our feet.”
Bar-Ilan University has teamed up with the Weizmann Institute of Science to create the Archaeological Sciences program, where archaeology is examined within a truly interdisciplinary setting. Open to undergraduate and graduate students alike, the program’s objective is to create expert archaeologists who are highly competent with the latest technology. The program is co-chaired by Prof. Aren Maeir, Director of the Biblical Archaeology Institute in the Martin (Szusz) Department of Land of Israel Studies and Archaeology, and Prof. Steve Weiner of the Weizmann Institute, and includes BIU researchers Dr. Ehud Weiss (an archaeo-botanist), Dr. Elisabetta Boaretto (a radiocarbon dating expert), and Dr. Ruth Shahack-Gross (a geo-archaeologist). This program receives support from the Yad Hanadiv foundation.

The first program of its kind in the world, this venture combines archaeology with methods based on physics, agriculture, geology, and biology. It enhances our knowledge of the past in ways never dreamed of – until now. In addition to geoarchaeology, the program supports research in diverse areas such as bioarchaeology and archaeobotany – the study of ancient agriculture, an area in which Bar-Ilan researchers are world renowned.

“We can’t do modern archaeology based on the physics of the 1950s,” Maeir says. “We must combine cutting-edge aspects of both the archaeological sciences and the ‘hard’ sciences.” BIU’s ability to meld the past with the present and future provides a dynamic base for this important work.
The breadth and depth of medical research at Bar-Ilan is no longer one of the University’s best-kept secrets. Drawing on multidisciplinary expertise in the exact, life and social sciences, Bar-Ilan is now at the forefront of Israel’s bio-medical research efforts. In addition to making significant contributions to human health and longevity, the University has been chosen to establish Israel’s next medical school. Whether it’s brain science or bio-engineering, Bar-Ilan is developing unique approaches and tools to deal with today’s most challenging medical problems – by fusing together hard sciences, Jewish ethics, and a cross-fertilization of diverse know-how throughout the University.

Take nanomedicine, for example. Bar-Ilan has developed nanomedical breakthroughs such as “smart bullets” that destroy cancerous cells without damaging healthy tissue, prosthetic limbs, and nanoparticles for fertility diagnosis and treatment. In fact, one of the unique features of the University’s research is the use of nanoparticles as drug delivery carriers for imaging and other medical applications.

BIU researchers hold dozens of medical-related patents in areas like early cancer detection, stem cell-based therapy, and bio-computer implants, to name just a few.

Focusing on drug development, many Bar-Ilan scientists are working to advance the treatment of many diseases including Alzheimer’s, Parkinson’s, Huntington’s, diabetes, and cancer.

Underscoring its multidisciplinary nature, Bar-Ilan conducts medical research in such diverse areas as medicinal chemistry, bio-physics, cellular and medical biology, bio-computers, medical imaging, and even social work, law and education.

A classic example of Bar-Ilan’s unique role in synthesizing Judaism and science is the University’s bio-ethics program. This one-of-a-kind program provides an ethical blueprint for the many life-and-death dilemmas arising from the practice of medicine in the 21st century.
BIU enjoys collaboration with world-leading universities, research institutes, hospitals, and pharmaceutical companies in many joint projects across the globe. Some of these partners include:

**Research Institutes**
- National Institutes of Health (NIH)
- Health Protection Agency (HPA)
- HPA Center for Infections

**Universities**
- University of Paris
- University of Geneva
- The Hebrew University of Jerusalem

**Hospitals**
- Mayo Clinic
- Norwegian Radium Hospital
- Sheba Medical Center
- Tel Aviv Sourasky Medical Center
- Rabin Medical Center
- Meir Hospital

**Pharmaceutical Companies**
- Merck
- Teva
It’s official! In an historic and long-awaited decision, Israel’s Council for Higher Education announced in January 2010 that Bar-Ilan University will be the home of the country’s newest medical faculty to be located in the northern Galilee.

In an overwhelming vote of confidence, and despite the tough competition from other contending universities based in the north, the Council for Higher Education endorsed the recommendation of its Professional Evaluation Committee, following up with a formal invitation to Bar-Ilan University to open a medical school. The government voted that the new medical school will be located in the northern town of Safed.

The Bar-Ilan University medical school, the country’s fifth, will answer a desperate national need for training more doctors. Among the many reasons that Bar-Ilan was considered the best choice:

- Bar-Ilan’s commitment to providing outstanding leadership in the Faculty of Medicine through its dean designate Prof. Ran Tur-Caspa, an internationally-recognized expert in his field. His significant clinical and research achievements and outstanding management abilities are combined with excellent interpersonal skills and a deep social/communal awareness.
- BIU’s pledge to incorporate innovative approaches in medical education based on Translational Medicine. This approach applies basic research to clinical work, while defining research parameters according to real-life needs that appear in hospitals and clinics. The BIU Faculty of Medicine will be the first to lead the way in Israel with this novel approach, joining the ranks of the most highly-regarded medical schools around the world.

Bar-Ilan’s new Faculty of Medicine will work in close concert with hospitals in the northern Israeli towns of Afula, Safed, Tiberias, Nahariya, and Nazareth, and community clinics throughout the Galilee region. As such, the University aims to advance and significantly upgrade the level of medical services in the north, bringing it to par with similar services in Israel’s center.

“I view the establishment of a medical school in Safed as a giant lever for the development of the Galilee as well as the education and medical institutions in the north. The project is of national importance, and we have decided to carry it out.”

Prime Minister Benjamin Netanyahu

Prime Minister Netanyahu is heading an inter-ministerial committee which will decide on the funding for the Bar-Ilan Medical Faculty in the Galilee, estimated at $200M over the next five years, which will include not only the medical training and infrastructure, but also state of the art research and upgrade of hospital facilities and capabilities. The University will work to match this sum by engaging the generous support of friends around the world.

“This decision is an important one for the Galilee, for Israeli youth, and for the health system, as it will help us to stem the expected shortage of doctors in the coming years.”

Minister of Education Gideon Sa’ar

“We are extremely proud to have been given this overwhelming vote of confidence from the government and this great opportunity to lead an initiative that will make the Galilee grow and prosper.”

BIU President Prof. Moshe Kaveh
The Faculty of Medicine's physical plant will consist of three specially designed complexes, which will include facilities for research, instruction, independent study, conferences, student and faculty services and amenities, and administration.

The innovative academic program will be based on the world’s best practices in both general and medical instruction. The practical, clinical implications of the material will immediately be demonstrated, in the classroom and in visits to local hospitals and clinics, starting in the first year of instruction.

As well as in hospitals, clinical training will also take place in Kupat Holim (Health Fund) clinics, which is yet another of the many innovations of the Faculty’s training program. Ambulatory chronically-ill patients, who are in the majority, rarely go to hospital, instead either going to clinics or staying at home. BIU medical students will have the advantage of seeing patients in non-hospital environments and via computer communication – providing a much needed service and hands-on training to the benefit of the future doctor as well as their patients.

The BIU medical school program calls for the upgrading of the infrastructure of hospitals in the region thereby improving the ability to service the population in the north.

In conjunction with its Faculty of Medicine, BIU will be launching Ilan Ba’Galil (“Tree in the Galilee”) for the benefit of residents of the north. The program will include such projects as providing fertility consultations and tests and creating innovative creative educational workshops in a variety of fields (i.e. ethics, leadership, increasing school productivity, improving relations between parents and children, teaching methodology, classroom management, cognitive thinking, family enrichment, and child-care).

BIU aims to eventually establish 40 medical research teams within its Faculty of Medicine, providing employment for Israel’s returning scientists.
In an effort to combat the "brain drain," which is severely hampering scientific and economic development in Israel, the government recently launched an initiative to "bring home" 100 Israeli scientists currently living and working abroad. Recognizing the importance of this national cause, Bar-Ilan has committed itself to bringing aboard half of them to its labs. The returning scientists include individuals just starting out on promising careers, as well as veterans with world-renowned reputations — they include physicists, chemists, engineers, and biologists.

Bar-Ilan has already successfully absorbed over half of these scientists, providing them with the cutting-edge research infrastructure and support they require to advance their work and make them feel at home. The University is continuing to identify additional candidates, while raising funds for the new labs, specialized equipment and other resources that are essential to them.

The six returning scientists profiled here are just a sample of the breadth and depth of the human capital that BIU is bringing home.
Dr. Mina Barda-Saad, a specialist in molecular immunology in Bar-Ilan University’s Mina and Everard Goodman Faculty of Life Sciences, completed all three of her degrees at Bar-Ilan University, followed by five years of research at the National Institutes of Health in Bethesda. Dr. Barda-Saad focuses her attention on a particular protein – called WASp – that is expressed exclusively in immune cells, and, in the case of cancer, causes actin self-assembly to proceed in an abnormal manner. Recipient of a special citation for excellence from the Israeli Knesset in 1988, and a prize for research excellence from NIH in 2004, her research was named one of the top five studies of 2008 by the Israeli Cancer Foundation.

Dr. Jordan Chill, of Bar-Ilan University’s Department of Chemistry, uses the University’s new state-of-the-art biological Nuclear Magnetic Resonance (NMR) Lab to study the structure of proteins. First exposed to the field in his PhD studies at the Weizmann Institute of Science, he was attracted by the challenge of determining the structure of proteins. He harnesses NMR spectroscopy to probe proteins and elucidate biological processes of disease, in the hope that this will lead to the design of more effective drugs. The Boston-born Senior Lecturer in Chemistry was raised and educated in Israel, completing Post-Doctoral studies at the Laboratory of Chemical Physics, National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK), National Institutes of Health, Bethesda, MD.

Dr. Rachela Popovtzer is an expert on electrochemistry and nanotechnology who recently returned to Israel after completing a post-doctoral fellowship at the University of Michigan. In her lab in Bar-Ilan University’s School of Engineering, she synthesizes gold nanoparticles that are covered with antigens – special molecules that link to cancer markers like a lock fitting into a key. When administered to the patient by IV, the nanoparticles travel directly to the cancer cells, covering the membrane with gold. This, in turn, creates an unmistakable signal on the CT image – that these cells are cancerous. This technique represents an entirely different way to read CT data and reveals – early on – whether cancer has spread to other tissues.
Since 2006, these experimental scientists have joined Bar-Ilan University’s ranks as part of the returning scientist program:

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<td>Shai Rahimipour</td>
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<td>Yuval Garini</td>
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<td>Jordan Chill</td>
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<td>Cyrille Cohen</td>
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- Rachela Popovtzer  | Engineering     | October 2008|
- Dror Fixler        | Engineering     | October 2008|
- Sol Efroni         | Life Sciences   | April 2009   |
- Yarden Opatowsky   | Life Sciences   | April 2009   |
- David Zitoun        | Chemistry       | April 2009   |
- Eli Sloutskin       | Physics         | October 2009|
- Amos Sharoni       | Physics         | October 2009|
- Arie Gruzman       | Chemistry       | October 2009|
- Shay Ben-Aroya     | Life Sciences   | October 2009|
- Tamar Juven-Gershon| Life Sciences   | October 2009|
- Sivan Henis-Korenblit| Life Sciences | October 2009|
- Doron Gerber       | Life Sciences   | October 2009|
- Erez Levanon       | Life Sciences   | October 2009|
- Avinoam Zadok      | Engineering     | October 2009|
Dr. Orit Shefi studies the structure and function of neurons in Bar-Ilan University’s School of Engineering. With a device called a pneumatic capillary gun – something she developed together with physicists at the University of California San Diego – she uses laser light to target a very small area, then shoots specially-designed gold micro- and nano-particles into living tissues. While these particles do not damage the tissue, they do affect gender expression – something that has allowed her to identify genes that influence nerve growth. Dr. Shefi works with medicinal leeches (whose nerve cells are big, accessible and organized in a simple way) that have only one function – to sense pressure or touch. This makes it possible – using time-elapscd imaging – to track how changes in gene expression affect the nerve cells as they grow.

Dr. Shay Ben-Aroya is a molecular geneticist who conducts advanced cancer research in Bar-Ilan’s Mina and Everard Goodman Faculty of Life Sciences. He has a PhD in Molecular Genetics from Tel-Aviv University and completed Post-doctoral studies at the University of British Columbia in Canada. Dr. Ben-Aroya analyzes the molecular basis of chromosomal instability (CIN) using the baker’s yeast Saccharomyces cerevisiae as a model organism. CIN is now widely recognized to be a major predisposing condition in cancer initiation and progression. Elucidating the genetic basis of CIN in model organisms will provide candidate genes for those CIN genes mutated in human cancer. Once such a list is obtained, genome-wide technologies are utilized and serve as the basis for detailed mechanistic follow-up studies as well as for novel therapeutic approaches.

Dr. Amos Sharoni is an experimental researcher who earned his PhD in Physics from the Hebrew University of Jerusalem, and was appointed a Postdoctoral Fellow at the University of California San Diego. Based in Bar-Ilan University’s Leslie and Susan Gonda (Goldschmied) Nanotechnology Triplex, his research focuses on nano-scale properties of complex oxides and spin electronics in metals. He has developed tiny, inexpensive sensors that detect trace amounts of explosive materials and chemical weapons compounds, a breakthrough with major strategic importance. Dr. Sharoni has published over 20 papers, and is a recipient of the Shimon Ofer Prize and the Wolf Scholarship.
"While Israeli policies and actions may sometimes deserve legitimate criticism, the assault on Israel’s existence and reputation has crossed all reasonable boundaries," says Prof. Eytan Gilboa, Director of Bar-Ilan’s Center for International Communication and designated head of the soon-to-be established School of Communication and Journalism.

"Israel, more than any other country today, must launch an innovative and bold public diplomacy effort based on the most advanced strategies and methods available," he says. Some of these strategies and methods are based on the extensive use of the Internet and virtual worlds, media relations, international public relations, cultural diplomacy, branding, the global Israeli business community, Israeli NGOs, international student and scholar exchanges, and Jewish communities.

Gilboa, a world-renowned scholar in public diplomacy, believes Israel hasn’t done nearly enough to effectively promote its image. "Israel has relied too much on hard power – rather than soft – to fight its battles," he says. Soft power, he explains, is getting what you want from enemies and allies via persuasion and attraction, while hard power is getting what you want via military force and economic sanctions. "A state needs to strike a balance between the two types of power, and ‘sell’ its policies, whether they are perceived as good or bad."

Successful image management means comparing the benefits of political or military actions with the potential costs to Israel’s standing in the world. Gilboa advocates intensive public diplomacy and media relations training for key government officials. He believes that Israel must train more official and unofficial spokespersons for Israel to speak Arabic.

Bar-Ilan’s Public Diplomacy team combines research and practice to help improve Israel’s image. "We want to provide the public and private sectors with concrete tools for dealing with enemies and friends alike," he says. The team also organizes workshops and simulation exercises for government officials, media representatives and other public and private sector personnel.

"Bar-Ilan has the best International Relations and Political Studies department in Israel," he says. "And when it comes to bringing together communications and international relations, our program is the most developed and integrated in the country. Bar-Ilan University is proud to be able to actively further Israel’s cause in the geo-political arena."

Only a bold new public diplomacy strategy can improve Israel’s negative image, according to Prof. Eytan Gilboa.
A WELL-KNOWN VETERAN OF THE PUBLIC DIPLOMACY BATTLEFRONT

Current Activities
- Nachman Shai is a member of the 18th Knesset (Kadima party)
- Final stages of PhD candidacy in Political Science and Communications at Bar-Ilan University, researching public diplomacy

Past Achievements
- Senior Vice President and Director General of External Affairs, United Jewish Communities (UJC), Israel
- Press Secretary of the Permanent Mission of Israel to the United Nations
- Press Advisor to the Israeli Embassy in Washington
- IDF Spokesman during the 1991 Gulf War
- Chairman of the Israel Broadcasting Authority (IBA)
- Director General of the Ministry of Science, Culture and Sport
- Military Correspondent, Reporter, and Editor for Israel Radio and TV

"Public diplomacy has become an integral part of Israel’s efforts to gain support for its actions in the security arena. I’m very pleased to have the opportunity to complete my advanced training in this subject at Bar-Ilan – which has a very refreshing view of this vital field – and I look forward to the University becoming a leader in public diplomacy, in Israel and the world.”
THE FORMULA FOR A HEALTHIER BRAIN

Using the brain’s own electrical patterns to counter depression is just one of the revolutionary treatment methods developed by Prof. Gal Yadid

“There are many brain diseases for which, as yet, there are no effective methods of treatment,” says Prof. Gal Yadid, of Bar-Ilan’s Leslie and Susan Gonda (Goldschmied) Multidisciplinary Brain Research Center. “Here at BIU, we try to understand the illnesses from different angles, and provide new approaches that will help more people afflicted by these devastating diseases.”

With that in mind, Yadid’s research team is doing revolutionary work in a number of areas – including depression – to provide an answer to this severe universal problem. “Five percent of the world’s population suffers from unipolar depression, and 1%-1.5% of the world’s population commits suicide as a result of depression,” Yadid says.

However, today’s most common treatment for depression – anti-depressants – takes effect only between two to 10 weeks after medication has started, and often does not have a long-term effect. Once the treatment stops, the depression returns.

“Brain activity occurs through a combination of chemical substances and electrical pulses,” Yadid says. “All current medication is based on treating the chemical substances present in the brain. We are doing something completely different – using the brain’s own electrical patterns to induce long-term change.”

His research team has identified an area in the brain that, when dysfunctional, causes depression. By copying the electrical patterns in this area in a normal brain and “pasting” them into the “depressed” area of a dysfunctional brain, Yadid has achieved an immediate long-term behavioral effect. “We simply ‘shift’ the state of depression to normal,” he says, adding that Bar-Ilan has patented his discovery of both the “depressed” brain area and the associated electrical pattern.

In another research direction, Yadid’s team has discovered what seems to be an extremely simple way to fight drug addiction: ingesting DHEA tablets, a neuro-steroid used by many Americans as an anti-aging and well-being pill.

“Studies have shown that addicts who stop using drugs and make it through the ‘incubation’ period have a much greater chance of staying clean,” Yadid says. Yadid’s revolutionary study shows that ingesting one DHEA tablet daily eliminated the craving for drugs during the incubation period and stopped relapse in some patients. “We’ve completed our first clinical trial, and have already seen a beneficial effect on patients – a reduction in withdrawal symptoms and drug-related depression and anxiety.”

Yadid has also made a major discovery related to dysfunctionality in post-traumatic stress disorder (PTSD) patients. His team discovered a biological marker to show which patients are prone to develop the illness as a result of being exposed to a life-threatening trauma.

Yadid says that BIU’s brain research center provides an ideal environment for his research. “What’s unique about our center is that it’s interdisciplinary. It removes the barriers between branches of science – so that, for example, biologists are working side-by-side with psychologists. This creates a perfect atmosphere for the free flow of interaction and ideas, which wouldn’t happen otherwise.”
Bar-Ilan’s new Magneto Encephalograph (MEG) – installed at the Leslie and Susan Gonda (Goldschmied) Multidisciplinary Brain Research Center at a cost of $3.6 million – is the first device of its kind in Israel, and one of only around 40 such units worldwide.

The MEG is a vital, state-of-the-art device that may be utilized for both basic research and medicine in areas such as perception, voluntary action, memory, and language. Studies using the MEG may provide early indications of pending brain malfunctions such as multiple sclerosis, Alzheimer’s disease, schizophrenia, and Sjögren’s syndrome. BIU scientists hope to use the device to explore the progression of these diseases, and evaluate the efficacy of treatments in halting their development.

Bar-Ilan recently held a MEG training course for researchers and students, and five intra-university experiments are already being conducted on the device. Several other researchers from outside of Bar-Ilan are planning to carry out their studies at the university in order to take advantage of the MEG.

The MEG is also valuable on a clinical level in determining the source of epilepsy when an electroencephalography (EEG) is insufficient. The MEG will soon be accessible to all Israeli research institutes and hospitals, and will provide a much needed alternative for patients who have had to travel overseas until now to be tested with the device. Bar Ilan recently signed an agreement with the company Brain Map, which will provide such diagnostic services.

BIU – improving the quality of life for Israel’s citizens.
“In today’s reality, religious and liberal thought often come into conflict,” says Dr. Moshe Hellinger of Bar-Ilan’s Department of Political Studies. “But if society takes a different perspective, there actually can be dialogue. And when there’s dialogue, I believe that you can live in two cultures at the same time.”

Given its strong traditional values and ethics on the one hand, and incorporation of key values and customs of the Western world on the other, Judaism has a lot to say about reconciling tradition with modernity, according to Hellinger. As such, he has created a program at Bar-Ilan that promotes dialogue between Orthodox and secular Jews, while probing how Jewish values can be implemented in modern democracies. “I’m very critical about many aspects of the Western world, but Judaism can’t be closed off from it,” he says. “My model promotes a way to bridge the gap — strict adherence to the observance of the mitzvot on the one hand, and openness to Western values on the other.”

Hellinger, who earned a doctorate in Judaism and Democracy, also leads a research program aiming to find ways to implement Jewish political thought on liberty, solidarity, and foreign and social policies within modern societies.

Hellinger is not a typical Orthodox Jew. Born to an ultra-Orthodox (haredi) family in Tel Aviv, he lived in a building with many secular families and was exposed to secular culture and texts. Also unlike many haredi Jews, Hellinger served in the Israeli army. Today he sees himself as part of the Zionist Orthodox movement, but is comfortable with all the worlds to which he was exposed during his youth.

As to the future, Hellinger is working on programs to encourage the integration of Jewish values in modern society. This would include identifying and implementing public-policy issues on traditional Jewish subjects from a contemporary, relevant context. Teachers and public officials would need to be trained to implement a combination of Jewish and democratic values within their daily work, while dialogue between secular and Orthodox Jews will also need to be promoted. Hellinger is also editing a series of books on democratic issues based on the Jewish political heritage.

“Bar-Ilan is the perfect place for my work, which is all about combining modern life with the precepts of the Torah. That’s exactly what the University is about,” he says. Through Dr. Hellinger’s work, the challenge of synthesizing Jewish tradition and modernity is coming closer to practical solutions.
THE PUBLIC’S DUTY TO KNOW

Dr. Tsuriel Rashi is a rising star in the global and Israeli mass communications study arena. He completed his doctorate under the supervision of Dr. Hellinger.

Current Activities
- Lecturer in Bar-Ilan’s Communications program in the Department of Political Studies
- Head of Department of Communications, Lifshitz College of Education
- Post-doctoral candidate, Tel-Aviv University, studying modern mass media and media ethics from the viewpoint of Jewish law and Jewish philosophy
- IDF military chaplain (reserves)

Past Achievements
- Developer of “Judaism and Communications” instructional program for Jewish religious schools, commissioned by Israel’s Ministry of Education
- Ordained rabbi, yeshiva high school teacher
- PhD in Political Studies with specialization in Communications, Bar-Ilan University

“Throughout its rich history, Judaism has always been aware of the tremendous inherent strength in mass communications. In Judaism and Jewish law, the agents of mass communications are entrusted with providing legitimate criticism of public officials and government actions. At Bar-Ilan I teach that information has to be made available to the public, because it is the public’s duty to know.”
“The Biblicists at Bar-Ilan may be studying texts and traditions that are ancient, but our methods are cutting-edge,” says Prof. Edward Greenstein of the Zalman Shamir Bible Department. This approach opens new avenues of thought and dialogue that bring unique perspectives to mankind’s never-ending quest to understand the Book of Books.

Greenstein, who made aliyah from the US in 1996, pursues his two main interests at BIU – comparing the Bible to other ancient Near-Eastern literature, and pursuing a philological, or literary, study of the Bible. While the introduction of modern perspectives in studying ancient texts – particularly the Bible – can be quite challenging, Greenstein and Bar-Ilan have been able to open up a new and fresh dialogue within the scholarly community.

“At Bar-Ilan, we show that the critical and traditional methods of study of the Bible can go hand-in-hand,” he says. “In addition to covering ancient Biblical interpretation and medieval commentaries, the Shamir Department looks at the Bible within a literary and historical context – and is considered one of the world’s strongest in this area.”

Among the many books of the Bible that Greenstein has studied, Job is his true love. Over the past few years, he has undertaken a painstaking, detailed, philological study of the book, which is usually viewed as dealing with the issue of evil. His research has included understanding the text’s meaning during ancient times, as well as probing its literary structure.

“I believe that the poet who wrote the Book of Job was extremely precise in drawing out certain ideas, and used all available literary means to develop and convey them,” he says.

While commentators and scholars have traditionally assumed that Job is primarily about why evil befalls righteous people, Greenstein has come up with some unconventional insights. He believes that the book is actually revolutionary, since it urges readers to accept a pragmatic, non-dogmatic view of God.

“At the end of the book, God’s message to Job and his contemporaries is that one should speak of God in a way based on experience and perception, and not necessarily out of a specific existing tradition,” says Greenstein, who has been invited to the US to lecture on his findings. “This is a groundbreaking book, which says we should consider our theological perceptions in light of our experience, and not perceive God only through a pre-written dogma. Your ‘God-talk’ has to be based on what happens in life.”

In developing his innovative conclusions, Greenstein, who is a Gwendolyn and Joseph Straus Distinguished Scholar, believes Bar-Ilan provides a fertile environment for his research. “We have a large and distinguished faculty here,” he says. “Colleagues discuss each other’s ideas, and even when there are differing views, there’s a lot of mutual respect.” Bar-Ilan University provides the backdrop for a civilized and constructive dialogue about man’s relationship with God.
"With assimilation and intermarriage so rampant, our aim is to identify what is alienating Jews from Judaism," says Prof. Zvi Zohar, Director of BIU's Rappaport Center for Assimilation Research and Strengthening Jewish Vitality.

Unique in focusing its research on the worldwide Jewish Diaspora, the Rappaport Center offers programs to strengthen the groups and individuals most at risk of assimilation. "We define assimilated Jews as those in danger of becoming detached from the Jewish people," Zohar says. "Our top priority is to reach out to those at the highest risk."

Those "in danger," according to Zohar, include individuals and communities living on the periphery of Jewish life – be it geographic (detached from other Jewish communities), demographic (small clusters lacking the critical mass needed to establish Jewish institutions and activities), ethnic (one parent is not Jewish), or cultural (uninterested in an active Jewish life). As a result, the Center has directed much of its recent activity toward small and medium-sized communities in Central and Eastern Europe, as well as to Russian-speaking Jews worldwide.

Zohar also believes that Israel should play a key role in helping revitalize Jewish life worldwide. As such, the Center sponsors several programs with local community partners, including sending Israeli teachers and lecturers to geographic and demographic peripheries; setting up leadership seminars for Diaspora rabbis; providing research grants for projects targeting specific Diaspora communities; and establishing Kisufim, a world network of Jewish writers which promotes an exchange of multilingual Jewish literature, publishing, and translation.

When it comes to addressing what many believe is the number one cause of assimilation - intermarriage - Zohar believes that making conversion more accessible is a key factor. His most recent book, Transforming Identity, which was written with Prof. Avi Sagi, looks at the halakhic sources for conversion. The book shows that according to Jewish tradition, conversion to Judaism is valid even if the convert does not strictly observe religious precepts, a view that runs counter to today's typical, more stringent rabbinic rulings.

Zohar, an Orthodox Jew who immigrated to Israel from the US at the age of nine, has a PhD in Contemporary Jewry from The Hebrew University of Jerusalem. He has led BIU's Rappaport Center since 2001, and believes much can be done to touch the communities and individuals at risk, including the surprisingly common Israeli expats who are assimilating.
“War, armed conflict, peace agreements and army service can impact men and women very differently,” says Dr. Orna Sasson Levy, a senior lecturer at the Gender Studies Program, part of the Sociology and Anthropology Department at Bar-Ilan University. “When these issues are analyzed, we usually get the man’s perspective. Our aim is to raise awareness about gender differences in national security in Israel.” As conflicts spread throughout the world, this work is becoming very important to global society.

Research has shown that women are affected by armed conflict differently than men. For example, during the Second Lebanon War in the summer of 2006, many women had to stop working in order to stay with their children, who were home on summer vacation, while their husbands fought in their reserve units. As a result of prolonged absence, many were fired from their jobs. And in a far more frightening example in countries like Rwanda and Bosnia, the rape of women has been a common occurrence during ethnic cleansing campaigns, Sasson Levy points out.

In the last two decades, feminist scholars worldwide have been re-examining the concept of national security from a gendered perspective, arguing that gender needs to be considered when shaping security conceptions. Although some of their academic work has affected the policies of international organizations, including UNICEF and international war crimes tribunals, and local NGOs in Israel, such as Isha L’Isha and the Israel Women’s Network, it has not yet entered the mainstream of academic discourse on security here.

Israel’s prolonged conflict situation and the centrality of the army in the country’s culture make it the perfect environment for gender and security research, according to Sasson Levy. “The army is one of the most gendered organizations that exist,” she says. “And unlike other institutions in which gender issues are disguised, division of labor according to gender in the army is very common and visible.”

That’s why the Gender Studies Program and Program on Conflict Resolution at Bar-Ilan University supported the creation in 2007 of the National Security and Gender Forum, which is led by Sasson Levy and her colleague Sarai Aharoni.

The Forum analyzes the concept of national security from a gendered perspective, and aims to advance academic and public discussions on the varied relations between gender and security. “We discuss the varying impacts of war and violent conflicts on men and women, and the unique implications they have on women’s lives as citizens, soldiers, caretakers, mothers and providers,” Sasson Levy says. “The Forum’s meetings and initial conference have brought together, for the first time, researchers who until now have worked independently of each other. We’ve made it clear that there’s a large group in Israel interested in the field of gender and security.”

It’s just as clear that this issue needs to be addressed on the global scale, and Bar-Ilan’s pioneering work is paving the way.
CLIMBING TO THE TOP

A Flurry of Activity to Upgrade BIU’s Human and Physical Capital
Bar-Ilan University celebrated its Jubilee Anniversary in 2005. At that time, an unprecedented campaign was launched that aimed to significantly upgrade BIU’s capabilities in terms of its faculty and research output, as well as its physical plant. With an initial goal of $250 million, the campaign is currently on target.

Please Watch Your Step – New Facilities Under Construction

In order to support the rapid expansion of Bar-Ilan’s student body, faculty, and research activity, the University requires a full complement of cutting-edge facilities across the entire 140-acre campus. Some of the more prominent of these are:

The Leslie and Susan Gonda (Goldschmied) Nanotechnology Triplex

This $50 million state-of-the-art facility, part of a $150 million nanotechnology initiative, is now set to be fully populated, equipped and operating. It covers an area of 21,000 square meters (226,000 sq. ft.) and is the tallest building on campus. The Triplex is home to some of the most sophisticated nano-scale research equipment ever assembled in a single facility at any university. It will contain labs focusing on medicine, photonics (optics), cleantech (environment), energy, and advanced materials development.

The Jim Joseph Education Building

This building, dedicated in September 2009, hosts Israel’s largest school of education – which certifies one out of 18 teachers in Israel – and the largest in-service training program in the country. The building also is the home of the Lookstein Center for Jewish Education in the Diaspora, which is BIU’s premier Jewish educational training and outreach program for teachers in the Diaspora, particularly the United States, and the University’s One Year Program for foreign students. The building spans an area of 6,540 square meters (70,396 sq. ft.), and includes classrooms, libraries, multimedia labs and pedagogical facilities.

The Gradel & Weisfeld Day Care Centre

The problem of student attrition due to child-raising responsibilities has now been addressed by the University which understands the needs of students to find quality child-care on a daily, weekly or monthly basis. At Bar-Ilan’s new day care centre, toddlers get expert care while their parents can focus on their studies in class, the lab, or the library.

Human Capital

Bar-Ilan is focusing on expanding both its faculty and student body through a series of significant changes, including:

Faculty – Through funding provided by donors and the Israeli government, Bar-Ilan University has become one of the most successful institutions in recruiting and acquiring top Israeli scientists living and working abroad. By October 2010 Bar-Ilan will have absorbed more than half of its committed total of 50 returning experimentalists, and is set to bring the rest of them aboard over the next few years. In addition, Bar-Ilan is recruiting a number of budding superstar researchers from within Israel. The enhanced research output already being provided by these new faculty “stars” is reflected in the increase in research grants, the development and diversification of research areas, and the growing number of doctoral students who are attracted to emerging fields.

Students – Bar-Ilan is the fastest growing institution of higher education in Israel, with a broader student community of some 33,000. One out of every four academic degree holders in Israel is a BIU graduate! The University’s undergraduate program is the largest among the country’s major research institutions. In addition to educating students pursuing undergraduate, graduate, and doctoral degrees, thousands more students are enrolled in the University’s certificate and enrichment programs. Dedicated to achieving excellence in all areas, the President’s Doctoral Fellowships of Excellence program has granted scholarships to more than 1,300 doctoral students at a total cost of approximately $55 million. BIU’s new Nivcharim (Chosen) program is attracting top students to BIU as their institution of choice, by providing generous stipends, mentoring programs, and other benefits.

We are confident that Bar-Ilan University’s new building and infrastructure initiatives, as well as our investment in top-class faculty and students, will contribute enormously to improving higher education in Israel, answering our nation’s needs well into the 21st century and beyond.
FOCUS ON STUDENTS

With its decided focus on students – the lifeblood of our university – BIU offers a nurturing atmosphere for achieving academic success and scientific prowess, while also enriching Jewish knowledge. Our students – who represent a microcosm of Israeli society – readily attest to the pervasively warm personal relationship with faculty members and camaraderie with classmates and peers.

KESEAH SILVERMAN
Age: 21

Academic Studies
Currently completing her third year of BA studies in Political Science; added Military Strategy and National Security studies to her BA work

Background
The second of three sisters, all of whom immigrated to Israel from the US and study at Bar-Ilan; their father is a former senator from Maine

“As an American immigrant looking to enhance my Jewish heritage, I find Bar-Ilan to be both a comfortable and dynamic institution. It’s a place where I can advance academically and learn about Judaism, as well as meet a unique mix of interesting people from all parts of the world. My academic studies here are unique in their scope and depth, which is a critical aspect for me.”

VIACHESLAV SLAVIC SHAMSHANOV
Age: 24

Academic Studies
Completed second year of MSc in Mathematics

Background
Visually challenged student who immigrated to Israel from Uzbekistan in 1996; successfully lobbied the Ministry of Industry and Trade to finance small businesses set up by physically challenged citizens

“Bar-Ilan has made a real effort to assist me with my disability. I’ve been assigned tutors, received additional time during exams, and taken some of my exams orally rather than in writing. This has helped to create a very positive academic experience for me, and I see my time at BIU as a key stepping stone to a bright professional future.”

New immigrants, Israelis from the periphery, students with physical and learning disabilities and thousands of men and women pursuing BA, MA and PhD degrees at Bar-Ilan benefit from the special climate on campus and our active outreach efforts to help and encourage today’s youth to maximize their academic experience and realize their academic and professional dreams.

BIU offers a nurturing atmosphere for achieving success
FOCUS ON STUDENTS

Bar-Ilan students naturally place their primary focus on their studies. But, in the realization that a well-rounded individual is truly a sum of his or her parts, our scholars participate in a plethora of enriching activities on and off campus. The BIU Student Union is responsible for organizing events for the student community. Besides offering weekly classes in Irish dancing, salsa or yoga, the Student Union organizes get-togethers during the Jewish holidays, national memorial services, movie nights, Students Day and special Shabbatonim for students who dorm on campus. It also organizes volunteer activities through a number of organizations, helping children with disabilities, gathering and distributing food to the needy, working with people from difficult socio-economic backgrounds, improving the environment, and combating traffic accidents, to name a few. From assisting Israeli residents situated in areas under rocket attack to providing free legal aid to needy citizens, BIU students are highly involved in volunteering their time and services to the community at large. Our students also shine in the arts – from photography exhibitions and competitions, through musical concerts, to the debating society and the Bar-Ilan Acting Society – BIU students are deeply committed to improving themselves in every way, as well as contributing to Israeli society.

YANIV SHITRIT
Age: 25

Academic Studies
Third-year BA student in Electrical Engineering

Background
The third of five children belonging to a family living in Shadmot Mechola, a religious moshav in the Jordan Valley

“When Bar-Ilan says it cares about its students, it really means it. I was called up to fight with my IDF reserve unit in the Second Lebanon War in 2006, and as a result, the University gave me – as well as the other students who fought in the war – an additional scholarship.”

EYAL KATVAN
Age: 35

Academic Studies
PhD candidate in the Interdisciplinary Program for Science, Technology and Society [second doctoral thesis]; researches physical and mental medical examinations of Jewish immigrants to Israel between 1919-1939

Background
Injured while serving in a special IDF unit; received a Doctoral Fellowship of Excellence for his thesis in Law

“Given my varied interests, Bar-Ilan is an ideal place for me. The University’s diverse research environment allows me to promote interdisciplinary cooperation and unconventional research initiatives that would be difficult – or even impossible – to carry out elsewhere.”

YANIV SHITRIT AND EYAL KATVAN REVIEW THEIR CLASS NOTES ON CAMPUS ALONG WITH FELLOW BIU STUDENT HANNY BRINNER (CENTER)
Bar-Ilan owes much of its extraordinary growth and achievements to a select cadre of individuals whose visionary leadership has been a motivating force behind the University’s increased prestige. Their devoted and diligent inspiration has led to the spread and recognition of BIU’s star throughout the international academic and Jewish community and the world at large.

AT THE HELM

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BAR-ILAN UNIVERSITY’S DISTINGUISHED HONORARY DOCTORS

Since its inception Bar-Ilan University has bestowed its prestigious Doctorate Honoris Causa upon a phalanx of exceptional individuals who have made their mark in the sciences, Torah studies, the arts, government, business and philanthropy. Among the 370 distinguished Honorary Doctorate recipients are:

**NOBEL LAUREATES**  
Prof. Richard Axel  
Prof. Roger David Kornberg

**SCHOLARS**  
Prof. Alan Dershowitz  
Prof. Deborah Lipstadt

**STATESMEN**  
Hillary Clinton  
Mikhail Gorbachev  
Albert Gore  
Václav Havel

**THE ARTS**  
Elie Wiesel  
Herman Wouk