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Arugot Habosem Garden Dedication

The entire Bar-Ilan family was saddened to hear of the passing of Daniella Shaina Lee Casper z”l. Daniella, the daughter of Frank and Dr. Kerri Lee of California, passed away in January 2014. We are honored to be able to commemorate her life and pay tribute to her memory through the dedication of the Arugot Habosem garden in her name.

[1] Yaffa Freund (niece), Rachel and Dr. Kerri Lee, Prof. Yaffa Zibershats, Rabbi Prof. Herschkowitz and Campus Rabbi Shlomo Shefer

Keren TsaD

Unfortunately, the Bar-Ilan family was not spared from loss during the recent Operation Protective Edge. Two of our students, Tsvi Kaplan and Dmitri Levitas, fell in the line of duty during the war. Tsvi and Dmitri were among the more than 600 Bar-Ilan students who bravely donned their uniforms and responded to the emergency reserve call-up. As a note of appreciation to these students, the university launched a special scholarship campaign that awarded each of our reservist students with a monetary scholarship. The campaign’s name has a dual meaning: TsaD is an acronym of Tsvi and Dmitri; it is also the Hebrew word for side. We aim to honor the memory of our fallen students and at the same time let our reservists know that we will always be there for them – we are by their side.

The scholarships were awarded to the reservists at a very emotional ceremony in the presence of the bereaved families and leading military personnel. Both Tsvi and Dmitri were to have graduated this summer. The university awarded their diplomas posthumously to their families.

May their names and memories be for a blessing.
Dear Friends,

This special commemorative edition of BIU Today is in honor and in celebration of the 60th anniversary since the founding of Bar-Ilan University. Over six decades ago our Founding President, Prof. Pinkhos Churgin, emphasized that aside from the knowledge we must bestow upon our students, it is the values that we instill in them that would make Bar-Ilan stand out from other universities. This vision of Prof. Churgin is today more relevant than ever.

For while BIU steadfastly works to improve Israeli and Jewish society the world over, it never compromises its commitment to academic and scientific excellence. BIU researchers of all disciplines are making scientific breakthroughs and winning prestigious awards and recognition, as you will see in the story on medical and scientific innovations and in the listing of awards bestowed upon our faculty in recent months. Among the articles in this issue: from time-space optics to the search for genes that play a role in addiction, from the study of the laws of war to that of Jewish medieval life, from research on urban ecology to that of the influence of theater on society, from using nanotechnology to analyze biological systems to engineering cryptographic algorithms to fight cyber-terror, from "fast-forwarding" medicine in the north of the country to providing professional development courses to the community-at-large – just sixty years after its establishment Bar-Ilan University is truly on the cutting-edge!

In celebrating our 60th, we give special mention to our notable women leadership. We are proud, too, of our outstanding students and unique foreign programs, as you will see within. An article on BIU "families" gives an historical perspective, while our 60th anniversary historical timeline "game" tracks some BIU highlights through the years. In addition to Bar-Ilan fulfilling the vision articulated above, I view the university as an academic institution with a mission of promoting dialogue between Judaism and other religions, as you will see in the article on interfaith.

May our university continue to grow from strength to strength!

Sincerely,

Rabbi Prof. Daniel Hershkowitz
President
Celebrating Our 60th!
The BIU Historical Timeline Game

Follow the trail to track landmark moments in the history of Bar-Ilan University from its establishment to today!

1948
Prof. Pinkhos Churgin dreams of creating in the new State of Israel an institution of higher learning “in which Jewish learning would be studied together with all the latest findings in the fields of human research.”

1949
Bar-Ilan University receives formal recognition by the Council for Higher Education.

1951
The number of students increases to 6,600 (from 5,500 the previous year), with 866 students studying in its regional branches across the country.

1953
The cornerstone is laid.

1955
Opening ceremonies are held. During its first year, 90 students study at Bar-Ilan in 34 courses held in 8 classrooms and 2 laboratories - all in temporary buildings, the number of staff members totals 23.

1956
The number of students rises to 1,75. In April, Bar-Ilan’s first buildings are dedicated.

1959
The first graduates, numbering 27, complete their Bachelor’s degree studies.

1961
The university graduates its first Master’s degree students - numbering five.

1963
The university graduates its first PhD student.

1965
Bar-Ilan grows to 2,000 students and 360 faculty members. The Ramat Gan campus includes 22 buildings.

1967
Large-scale aliyah after the Six Day War brings many new immigrants to Bar-Ilan, swelling the student body to over 2,000. The first version of the “Responsa Project,” enabling the locating of sources in Halakhic literature throughout the ages, is launched. The central library, named after Gustav Wurzweiler, is inaugurated.

1968
The Ludwig and Erica Jesselson Institute for Advanced Torah Studies– the Midrasha– is opened, with 44 students.

1969
The faculty and the Bar-Ilan University Research & Development Co. Ltd. (BIRAD) is established. The female branch of the Jesselson Institute for Advanced Torah Studies – the Midrasha – is opened, with 44 students.

1971
The Faculty of Law is opened, quickly becoming one of the most sought-after legal programs in the country.

1973
Bar-Ilan initiates the Doctoral Fellowships program for outstanding students. The university is awarded a prize in recognition of the beauty of its campus. New community outreach programs are initiated, such as the establishment of academic centers in Bnei-Brak and Jerusalem for the benefit of ultra-Orthodox men and women.

1976
BIU now has over 12,000 students, including a large influx of new immigrants from the former Soviet Union. There are 35 academic departments with some 300 intensive research projects being carried out in the natural sciences alone. BIU doubles in size and starts building some $200 million of new facilities on a campus extension north of the main campus.

1980s
The Faculty of Jewish Studies, the largest of its kind in the academic world, undertakes major projects, such as a new edition of “Mikraot Gedolot” and a new, updated CD-ROM of the “Responsa Project.”

1990s
BIU now has over 20,000 students, including a large influx of new immigrants from the former Soviet Union. There are 35 academic departments with some 300 intensive research projects being carried out in the natural sciences alone. BIU doubles in size and starts building some $200 million of new facilities on a campus extension north of the main campus.

Fast Facts about BIU Today
- 24,400 Academic Degree students, 6,600 non-degree students – 30,000
- 1,800 faculty members
- 9 Faculties: Mina & Everard Goodman Faculty of Life Sciences, Exact Sciences, Medicine, Engineering, Social Sciences, Humanities, Jewish Studies, and Law
- 6 Interdisciplinary Graduate Study Programs in Brain Sciences, Nanotechnology, Hermeneutics & Cultural Studies, Conflict Management & Negotiation, Science, Technology & Society, and Gender Studies
- 53 Departments
- 8,000 Academic Courses
- 70 Research Centers and Institutes
- 80 international Academic Research Collaborations
- 77 Endowed Chairs
- 300 Laboratories
- 29 Libraries (including the Medical School) holding more than 1,000,000 titles
- 4 Regional Colleges under the academic supervision of BIU located across Israel in Acre, Safed, the Jordan Valley, and Ashkelon
- 120,000 Alumni

*All figures are approximate and updated as of January 2015
Bar-Ilan University President Rabbi Prof. Daniel Hershkowitz meeting at the Vatican with Pope Francis. During the meeting the Pope and the President agreed upon the need to strengthen relations between Jews and Christians around the world.

Indeed, from the Dr. Josef Burg Chair in Education for Human Values, Tolerance and Peace, to a popular BA course promoting dialogue between Jews and Arabs, to the “coexistence through music” course for Jews and Arabs – BIU takes tolerant discourse between Judaism and other religions very seriously. In fact, the university just opened a new study track in Religion and Conflict Resolution, which postulates that religion can be the basis for deep conflict resolution. The first of its kind to be established in Israel, it will seek to bridge the theory, practice and texts of religion and conflict resolution.

“For the first time leading Jewish, Christian and Muslim practitioners of religion and conflict resolution from all over the world join together in creating a joint professional identity and associating that identity with an academic home – providing the backdrop for the very essential blend of theory and practice that is a must in our field,” said Dr. Alicía Isaacs, co-chair of the study track.

The BIU School of Medicine in the Galilee is a shining example of interfaith cooperation and interchange. The School caters to the many populations of the north, be they Christian, Jewish, Druze or Muslim, working harmoniously with hospitals staffed and managed by Arab as well as Jewish doctors.

The university also takes pride in its scholars who specialize in interfaith dialogue. Two who stand out, both in the Naftali-Yaffe Department of Talmud and Dral Law: Rabbi Prof. Daniel Sperber, President of the Ludwig and Erica Jesselson Institute for Advanced Torah Studies, has been involved in interfaith dialogue with Muslims, Sikhs, Hindus and Christians for over 30 years. Rabbi Dr. Jeffrey Woolf is well known for promoting interfaith understanding, has served as a representative of major Jewish organizations in interfaith dialogue, and is a noted expert in the history of Jewish-Christian relations.

In addition, BIU is involved in a multitude of conferences and programs with the aim of improving and expanding fruitful interfaith discourse. Among them, last May, Cardinal-Archbishop of Paris André Vingt-Trois headed a delegation of French Catholic leaders who took part in a symposium organized by the university on “The Challenges of Religious Leadership in a Democratic Society.” “Economic and political conflict often arise and cause bloodshed throughout the world, but there will never be peace in the world unless there is peace among religions,” said Cardinal Vingt-Trois.

On January 22, BIU and Germany’s Leipzig University held a two-day symposium in Leipzig marking International Holocaust Day and 70 years since the liberation of the Auschwitz concentration and extermination camp. The gathering opened with a Jewish prayer service attended by 2,000 Jews and Christians at what was the home of the Grand Synagogue, destroyed on Kristallnacht, and today the site of a Holocaust memorial. This was followed by a recitation of Psalms by President Hershkowitz, who spoke of how most of his and his wife’s families perished in the Holocaust.

The organizers, BIU’s Ludwig and Erica Jesselson Institute for Advanced Torah Studies and the University of Leipzig’s Faculty of Theology, both recently signed an academic cooperation agreement to sponsor joint conferences and research and establish a faculty and student exchange program. Rabbi Shabtai Rappoport, Director of the Beit Midrash at the Jesselson Institute noted: “With the growing tide of anti-Semitism around the world and the recent terrorist attacks in France, events such as this, which promote intercultural and interfaith dialogue based upon mutual respect, are crucial now more than ever.”
They say that time stops for no man. But according to one man, time can be made to slow down, creating an effect seemingly plucked from the annals of science fiction: for just a fraction of a second, an event can be rendered invisible.

"Einstein’s theory of relativity is based on the idea that – when you manipulate light – there’s an interchange between time and space," says Dr. Moti Fridman, a BIU alumnus who trained at the Weizmann Institute then returned to campus after completing a post-doctoral fellowship at Cornell. "Here in our lab, we’re exploring the ways in which temporal and spatial optics can be combined. Our ultimate goal is to create an entirely new discipline: Time-Space Optics."

In research that has inspired comparisons to the fictional “invisibility cloak” from the Harry Potter series, Fridman has demonstrated how artful manipulation of laser light can cause a moment in time – along with anything that might be observed during its duration – to disappear in plain sight.

"At Cornell, we passed a laser through a ‘time lens’ – a fiber optic glass with a strong, internal pulse laser," Fridman explains. "Slowing down, then speeding up, we created a temporal gap – like the gap created when cars are traveling in a line, and some slow down to let a pedestrian cross. Any event taking place during this gap – which lasts 40 trillionths of a second – happens in a light-free environment and is therefore invisible; in the absence of light, the light scattering that allows events to be seen simply cannot occur."

Alongside its demonstrated talent for hiding information, this phenomenon – called temporal cloaking – has implications for information sharing, in the all-optical switches envisioned for futuristic computation and communication devices.

"A time lens might allow someone to insert information into a continuous data stream, manipulate it, then reverse everything, all on an ultra-fast time scale," Fridman says. "We’re still at the early stages, but as we get closer to the limits of current data transfer systems, temporal cloaking might provide a creative solution, both for increasing bandwidth, and for keeping data secure."

Creative communication is somewhat of a specialty for Fridman, who, as a graduate student, performed in a student theater group and also clocked significant hours behind the wheel of “Mada-Noa” – a mobile science education lab operated by the Weizmann Institute. Not surprisingly, Fridman’s passion for teaching has already been put to use by the BIU School of Engineering, in lectures for potential students.

“Temporal cloaking is a new and exciting field, and teaching is a rewarding area of research," Fridman adds. "I get to demonstrate my work to students, and they get to learn about it in a fun and interactive way."

Fridman – who also holds an appointment at the Bar-Ilan Institute for Nanotechnology and Advanced Materials (BINA) – began building BIU engineering connections while still at Cornell.

"Bar-Ilan is home to Israel’s youngest electro-optics group," he says, adding that he is looking forward to collaborating with Prof. Zeev Zalevsky – head of the Nano-Photonics Center – as well as the trio of fellow “returning scientist” recruits Drs. Doron Naveh, Dror Fixler and Avi Zadok. "In a new institution, you have the freedom to do things that might not be possible in a more established academic environment. When I knew I would be coming back to Israel, joining BIU was my highest priority and I was right; I’ve gotten in on the ground floor, and it’s a very exciting place to be."
Theater is a social space for thinking and learning about history and philosophy," says Bar-Ilan University’s Sharon Aronson-Lehavi, senior lecturer of theater and performance studies in the Department of Comparative Literature. Aronson-Lehavi is particularly interested in "questions of religious and holy subject matter in the theater and how these same texts and ideas are reworked in both medieval and modern times."

A prime example is the Oberammergau Passion Play. For nearly 400 years, the Bavarian village of Oberammergau in Germany has staged its eponymous and notoriously anti-Semitic Passion Play. Performed only once every decade, and involving nearly half the town’s 5,200 inhabitants, the Oberammergau Passion Play has traditionally cast the Jewish people in a particularly negative light – so much so that in 1934, Adolf Hitler gave the play his public endorsement. But since 1990, under the direction of a young new director, Christian Stückl, many of the anti-Semitic tropes have been toned down or eliminated. Stückl has introduced Hebrew into the script and brings his actors to Israel to learn more about Judaism from the source. "It’s fascinating to see the way the play grapples with changes but nonetheless stays as faithful as possible to the core story," Aronson-Lehavi says.

Exercising the way the play has changed over the years – and particularly since 2010 – is emblematic of Aronson-Lehavi’s research and teaching focus. Oberammergau isn’t the only example of theater as a microcosm of change in society that Aronson-Lehavi has studied. Her book Street Scenes: Late Medieval Acting and Performance examines the ways biblical and religious theater in the late medieval era reflect contemporary social questions of identity. In the medieval period, for instance, many plays had religious themes. The story of Noah and the flood was a popular one. "One might assume these were just didactic performances of a biblical text," Aronson-Lehavi explains, "and on the face of it, it’s a retelling of sacred history as set out in the book of Genesis. But what we find is that nearly all of the medieval plays of the flood added in Noah’s wife as a major character." Noah’s wife is often portrayed as shrewish, Aronson-Lehavi continues. "She doesn’t want to go on the ark and you see scenes of almost domestic violence between her and Noah." For Aronson-Lehavi, this is eye opening. "If you go beyond the reading of the text itself, you can discover much about the workings of society and culture during that time period. You can really hear the voices of the people as they were then." The religious frame of the play "allows people to express their own presence."
Forty years ago, Bar-Ilan Bible Prof. Menachem Cohen began a massive academic and spiritual undertaking: to create the most accurate version of the Tanakh ever. Dubbed the Mikraot Gedolot-HaKeter (HaKeter means “crown” in Hebrew), this new version of the scriptures and its key commentaries is based on the famed 1,000-year-old Aleppo Codex, and corrects literally thousands of errors that have crept into the Bible.

The Mikraot Gedolot-HaKeter project is just one of the impressive achievements of Bar-Ilan University’s flagship Faculty of Jewish Studies. Comprising ten separate departments, including Bible, Jewish History, Middle Eastern Studies, and Archaeology, the Faculty has been growing at a time when other universities have seen interest in Jewish Studies drop. Prof. Elie Assis, dean of the Faculty, attributes this to the emphasis Bar-Ilan as a whole places on the subject, and to the openness of the Faculty to its students and staff members.

“While the studies in the Faculty are totally academic,” Assis says, “Bar-Ilan University particularly makes sure Jewish studies will be strong and influential.”

As for the Mikraot Gedolot-HaKeter, 16 out of 20 volumes have been published so far with the remaining books due out soon in what Bar-Ilan University hopes will be the next generation bible for the digital age. It will mark the “crown” in the Jewish Studies Faculty’s formidable accomplishments.
Rejected by the girl of his dreams, the male of the species has been known to seek out an alcoholic consolation prize down at the bar. But even when the species in question is not human, and even when the “bar” is an ethanol-laced laboratory beaker, this sex-specific coping mechanism still holds true—providing a rare glimpse into how neural circuitry and behavior are both modified by social experience.

“There is more to the social life of the common fruit fly than meets the eye,” says Dr. Galit Shohat-Ophir, a lecturer in the Mina & Everard Goodman Faculty of Life Sciences who trained at the Weizmann Institute and completed post-doctoral fellowships at UCSF and the Howard Hughes Medical Institute in Virginia. “Males can differentiate between virgin females—who are receptive to their advances—and females that have already mated. Ethanol vapor causes flies to lose their inhibition, then their coordination; in other words, fruit flies, like mammals, can get rip-roaring drunk. In my post-doctoral research—which was published in Science—I explored the connection between sex and alcohol, and examined how sexual ‘success’ affects flies’ alcohol-seeking behavior.”

Shohat-Ophir explains that fruit flies’ neural mechanism for processing rewards—pleasurable activities such as eating or sex—also process the response to drugs or alcohol. Because of this, she says, alcohol can be used as a probe to reveal how reward behavior is encoded in the brain.

You Can Lead a Fly to Alcohol—But Can You Make It Drink?

Shohat-Ophir’s investigation began with something that could be described—metaphorically—as evil matchmaking. “We paired male fruit flies with pre-mated females, guaranteeing that the males’ courtship behavior would be rejected,” she recalls. “After this rejection experience, the males were presented with two options—plain food, or food with an elevated ethanol content. The rejected males preferred the high-alcohol food, voluntarily consuming pharmacologically significant amounts.”

On the other hand, pairing males with virgin females produced sexual success—as well as a measurable reduction in male flies’ alcohol-seeking behavior. This shed light on how social experiences are encoded on the molecular level.

“We’re now trying to identify patterns of RNA expression and editing, in hopes of finding genes that play a central role in the addiction process.”

Settling In

Shohat-Ophir’s work is currently funded by the Israel Science Foundation, as well as a European Union grant that supports world-traveling academics as they settle back into their country of origin. But a year since her return to Israel, Shohat-Ophir says that the most important support she has received is from the BIU community itself.

“I’ve found Bar-Ilan University to be a very warm and accepting place, where people are doing really good basic science,” she says. “I’m looking forward to continuing my work here for a very long time.”

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Prof. Avi Bell has never shied away from controversy. The professor in the Bar-Ilan University Faculty of Law has written on hot topics such as the infamous Goldstone Report and the implications of the Levy Commission’s report on the status of building in Judea and Samaria.

Originally from Chicago, Bell has been at Bar-Ilan since 2002 and, despite such high profile papers, he jokes that most of his work is actually on “really boring stuff” like land planning and property tax law. Hardly. For his participation in a project being run by the Kohelet Policy Forum where he is a research fellow, Bell is looking at the unique situation in Israel where, unlike anywhere else in the West, nearly all of the country’s land is owned by the state.

The question Bell asked is: when the government turns some of that land over to property developers (a key way to bring down new home sale prices), who controls what can be built there? Not the developers or the government, but the district planning board and the municipality. But the district planning boards don’t have any incentives to approve residential development, and the way property tax is currently structured, municipalities prefer commercial development like malls over residential construction. As a result, both district planning boards and local governments drag their feet when it comes to approving new residential construction. “It may sound funny, but one of the keys to lowering housing prices is actually reforming property tax and local government law,” Bell says.

Bell, who passed the bar in both Israel and New York and clerked at Israel’s Supreme Court, also wrestles with questions that even he wouldn’t call “boring.” For example, the laws of war. “If we accept the basic concept that wars should be legal but certain ways of conducting them should not be, then what are those rules?” Bell asks. He writes about the difference between hypothetical “rules on paper” and those taken in a combat situation and is concerned that Israel “tends to be judged on the basis of facts that exist only in the minds of its accusers by a theoretical standard that cannot exist in the real world.”

What is clear is that, whether writing about property tax or warfare, Avi Bell’s accomplishments are anything but theoretical.

From Tax Laws to Warfare – Anything but Boring
When urban construction creeps into traditionally green areas and threatens animal migration routes, Israeli environmentalists are quick to raise their voices in protest. But when construction patterns prevent humans from traveling efficiently from point to point inside a city, the silence is deafening. One city dweller who is speaking up is Dr. Orit Rotem, who is applying quantitative tools from biology and environmental ecology to the promotion of people-friendly—and successful—urban design.

"My research focuses on how city planners strike a balance between residential and commercial space, and how the physical placement of retail centers affects residents’ quality of life," says Rotem, a lecturer in the Department of Geography and Environment who trained at the Hebrew University and joined the BIU faculty after completing post-doctoral research at Delft University of the Netherlands. "Like it or not, shopping centers have become an important factor in a city’s success, because they draw individuals into the city and provide tax revenue. At the same time, real-estate pressures can lead to the construction of unsuccessful retail centers where businesses fail due to local competition, or because traffic patterns and limited public transportation makes accessibility difficult. Ecology-inspired modeling makes it possible to understand the factors involved, and to plan for better-functioning cities in the future."

Rotem’s current research, which is supported by a grant from the Israel Science Foundation, employs “Least Cost Modeling” — a quantitative technique used for making rational decisions about investments in transportation and other urban infrastructure projects by matching resources to the needs and socio-economic profile of a city’s various residential populations. In addition, Rotem examines how the fragmentation of what she calls retail “habitats” — discrete physical areas devoted to commerce — render them successful or not.

“There are many factors that determine whether a mall will contribute to a city’s well-being,” Rotem explains. “A long, thin retail area increases points of entry, and boosts interaction with the surrounding areas. The size and the type of stores must be weighed against consumer habits, factors such as car ownership, and the presence of competing businesses. The total number of retail fragments, and the spacing between them, must also be taken into account.”

This integrated approach has allowed Rotem to create something that has never existed before: a visual representation a city’s existing retail-related resources, population mobility patterns, and accessibility trouble spots.

“We examined the city of Jerusalem and created a color-coded analysis of retail fragmentation, as well as the effect that this fragmentation has on residents’ ability to reach the shopping centers designed for their enjoyment,” Rotem explains, adding that this urban “snapshot” reveals to what extent a planned urban area is functioning according to plan. “Now, we’re gathering the data necessary to create the same sort of analysis in greater Tel Aviv.”

This is not the first time that Rotem has demonstrated how, when planning a city, individual neighborhood “fragments” should be taken into account. “My Masters thesis—which became my first academic publication—criticized the long-held idea that urban density leads to lower energy consumption,” Rotem recalls. “I reached my conclusions by not examining the city as a whole, but rather, as the sum of its different—and varying—parts.”

Rotem believes that a greater awareness of the principles of urban ecology will someday lead to better planning—as well as a more sustainable, enjoyable living environment for city dwellers.

“Urban success goes beyond the calculation of tax revenue or population growth—it’s about promoting human interaction and urban livability,” she says. “People say that the ‘village square’ where townspeople used to gather has changed, or no longer exists. But today, shopping malls are where you see people who are not like you. The goal is to create cities that are worth living in—together.”
Nano Meets Bio
How Dr. Doron Gerber “Channels” Life’s Big Picture

A busy scientist who juggles a large number of collaborative projects while supervising a lab full of students, Dr. Doron Gerber schedules his morning meetings early – this, despite the fact that, as a new father, he claims to go about his duties in a near-constant state of sleep deprivation. However, there is another “baby” that puts a sparkle in Gerber’s eye at any hour of the day: the newly-opened nanofabrication facility that is making his lab in the Leslie and Susan Gonda (Goldschmied) Nanotechnology Triplex the go-to address for biological researchers in need of cutting-edge device design.

“We get requests from all over the country for customized, high-throughput tools for examining molecular interactions within living systems,” says Gerber. “During my post-doc at Stanford my lab was the first to identify host proteins involved in Hepatitis C infection, and a drug compound based on our data has already passed preliminary clinical trials,” he says. “More recently, our group here at BIU identified protein interactions involved in RSV – a respiratory virus associated with childhood pneumonia.

In another recent project, Gerber designed a chip that screens for different categories of enzymatic reactions – a significant achievement, both because of the short time-scale within which such reactions occur, and because of the potential contribution of this approach to future medical treatments.

“Whatever the focus of the investigation – whether it’s cell growth, or disease genetics, or any other bio-based subject – our platform, which allows scientists to perform thousands of experiments simultaneously, is a quick and relatively inexpensive way to get to the big picture.”

Gerber’s technology centers on flexible, transparent polymer chips, etched with thousands of micron-sized “microfluidic” channels, each one of which houses a particular experiment. “Every channel is primed with the biological material needed to produce a particular protein from DNA,” Gerber explains, adding that the small amount of material required for a working chip – just 25 microliters for 10,000 interactions – is a major improvement over traditional techniques. “As the chips are being fabricated, computer-controlled pressure opens or closes the channels so that specific proteins come together, and also controls digital ‘valves’ that fine-tune the quantities involved. Once the interactions have occurred, fluorescent signals – which indicate that molecular binding has occurred – are analyzed by a specialized laser scanner. This technology provides a huge amount of data – essentially, it gives a ‘bird’s eye view’ of the full range of interactions occurring in a biological system.”

Gerber’s own research has already revealed medically significant results. “During my post-doc at Stanford my lab was the first to identify host proteins involved in Hepatitis C infection, and a drug compound based on our data has already passed preliminary clinical trials,” he says. “More recently, our group here at BIU identified protein interactions involved in RSV – a respiratory virus associated with childhood pneumonia.”

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“Our screening system tracks DNA methylation, an enzyme-mediated process involved in transforming precursor stem cells into different types of mature cells and tissues,” Gerber explains. “The more we know about this process, the closer we will be to the medical goal of re-programming cells in order to treat or prevent disease.”

Now a five-year “veteran” of the Bar-Ilan Institute of Nanotechnology and Advanced Materials (BINA) – where a high percentage of the faculty are young, recently-recruited scientists – Gerber is now starting the process of tenure review. And while his research is supported by prestigious international grant-making organizations, Gerber finds he is most energized by the support that his own hard-earned knowledge is providing for scientific groups closer to home.

“At least a dozen BIU laboratories are using my technology,” he says, “and outside collaborations are on the rise. While we were building up our nanofabrication facility, I hesitated to ‘market’ our chip-making services because I didn’t ever want to say that there’s something that we couldn’t do. But now, you can just go to our lab’s website; the range of projects posted there shows that we’re fully operational.”

A busy scientist who juggles a large number of collaborative projects while supervising a lab full of students, Dr. Doron Gerber schedules his morning meetings early – this, despite the fact that, as a new father, he claims to go about his duties in a near-constant state of sleep deprivation. However, there is another “baby” that puts a sparkle in Gerber’s eye at any hour of the day: the newly-opened nanofabrication facility that is making his lab in the Leslie and Susan Gonda (Goldschmied) Nanotechnology Triplex the go-to address for biological researchers in need of cutting-edge device design.

“We get requests from all over the country for customized, high-throughput tools for examining molecular interactions within living systems,” says Gerber. “During my post-doc at Stanford my lab was the first to identify host proteins involved in Hepatitis C infection, and a drug compound based on our data has already passed preliminary clinical trials,” he says. “More recently, our group here at BIU identified protein interactions involved in RSV – a respiratory virus associated with childhood pneumonia.

In another recent project, Gerber designed a chip that screens for different categories of enzymatic reactions – a significant achievement, both because of the short time-scale within which such reactions occur, and because of the potential contribution of this approach to future medical treatments.

“Whatever the focus of the investigation – whether it’s cell growth, or disease genetics, or any other bio-based subject – our platform, which allows scientists to perform thousands of experiments simultaneously, is a quick and relatively inexpensive way to get to the big picture.”

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In 1349, following the false accusation that they had poisoned local wells with plague and the subsequent violence resulting in the loss of hundreds of lives, Jews were expelled from the German city of Strasbourg. Allowed back in and re-expelled in 1390, Jews were then forbidden to live and work in the capital and principal city of Alsace for 400 years.

If you only read those official laws, you might think the connection between the Jewish community and the town was at a permanent dead end. How then to make sense of a series of contracts that permitted Jews to work in Strasbourg? Or records of court cases involving Jews and a wealth of work-related correspondence between Jews and Christians in the town.

Attempting to figure out that puzzle is Dr. Debra Kaplan, senior lecturer in the Israel & Golda Koschitzky Department of Jewish History and Contemporary Jewry at Bar-Ilan University. Kaplan, who joined BIU this year after nine years teaching Jewish history at Yeshiva University in New York, studies the daily lives of “ordinary Jews” in the medieval and early modern period. “I want to know what their lives were like on a regular Tuesday,” Kaplan explains. “It’s a very different kind of research than looking at elite figures in the Jewish community as most scholars do.”

In Strasbourg, Kaplan discovered, there really were two competing sets of laws, but for decades, only the informal ones, those permitting commerce, were enforced. And it went beyond just work and trade. “In the beginning of the 16th century, you find records of Jews answering questions about Judaism and teaching Hebrew to Lutheran theologians,” she says. “There was a great deal of interaction between Jews and Christians in this period.”

Still, Jews couldn’t live in Strasbourg itself and were forced to dwell in the surrounding villages. Here, Kaplan made another discovery about “ordinary” life. “Jews lived in small villages where there might be only a single Jewish family or two. We tend to think that Jewish communities in Europe were large and centralized, but here we can see Jews living in places where there was no daily minyan, no rabbi or mohel or shochet.”

This can teach us a lot about contemporary Jewish society, Kaplan says. “It tells us that Jewish life was never monolithic and that communal life back then was more diverse than we think. Just as Jewish life today is not monolithic.”

Now living in multifaceted modern Jerusalem, Kaplan says she is grateful that Bar-Ilan University has enabled her to not only study Jewish history, but to make a little of her own, too.
When Dr. Nathan Keller entered the Technion at the age of 16, his teachers immediately recognized that this was a young man who was going places. Eventually, both Keller and one of his mentors independently decided that Bar-Ilan University was the place to go. In 2012, Keller was recruited to BIU as a member of the mathematics department. Less than a year later, his former advisor at the Technion – Rabbi Prof. Daniel Herschkowitz – was named BIU’s tenth President.

“Prof. Herschkowitz was the dean of the Math Faculty when I was doing my Masters,” says Keller, 32, a Russian-born expert in cryptology and combinatorics who later went on to earn his PhD from Hebrew University. “Luckily, he still found the time to help me.”

Judging from the buzz created by Keller’s early academic work, luck had very little to do with it.

“In 2003, my colleagues and I discovered that second-generation cellphones were insecure – simple, relatively cheap equipment made it possible to listen in on any conversation, or even hijack phones altogether,” Keller says, adding that, after these findings were published, the story received coverage in media outlets including CNN and the New York Times. “Industry leaders accepted our analysis. However, because the fix required an antenna re-design costing tens of millions of dollars, the problem wasn’t addressed until the next generation of phones was unveiled, this time including protection based on our research.”

Keller focuses on examining the efficacy of codes designed to protect sensitive information. Sometimes, however, the “chinks in the armor” that Keller discovers can be used to shift protected information out of the shadows, and into the right hands.

“Five years ago, we discovered that car immobilizers can be hacked so that an attacker can acquire the password,” Keller says. “Practically speaking, not many car thieves would choose code breaking over breaking a window, but our results were of interest to law enforcement authorities. At the request of a European police force, we created an algorithm that can be used to open immobilized cars without being detected – a technique that can be helpful in intelligence gathering missions.”

According to Keller, cryptographic analysis is increasingly a matter of national security. “Until the mid-20th century, most cryptography research was devoted to protecting military secrets,” he says. “But in the age of cyber-terror, civilian infrastructure presents a very attractive military target. A computer virus that knocks out a country’s electrical grid can be more threatening than a tank division.”

Keller also works in combinatorics – a branch of mathematics related to the study of finite or countable discrete structures, which has implications for a wide range of applications.

“I study problems where many ‘inputs’ going into a complex system have to result in a single ‘output’, such as a yes or no answer,” Keller explains. “Relevant to everything from elections to economics to communication networks, our techniques help identify the path most likely to overcome ‘noise’, and to provide useful results.”

In his own career path, Keller has consistently balanced the professional and the personal. “I served in the IDF in the hesder yeshiva track, and, eventually, completed rabbinical ordination,” he says. “Married by the time I began my post-doc, I chose not to go abroad for religious reasons. I still collaborate with one of my post-doctoral hosts at the Weizmann Institute: Prof. Adi Shamir – winner of the Turing Award, considered the ‘Nobel’ of computer science.”

Having presented talks at Bar-Ilan University, Dr. Keller was familiar with the math department when he made his move. “When I was invited to join the BIU faculty, I didn’t hesitate – I knew it was a good match.”
“...The benefits are not just for the hospital. It’s one of the best things to happen to the Galilee itself in the last 70 years...”

The BIU School of Medicine in the Galilee
Fast-forwarding Medicine in the North

The BIU School of Medicine in the Galilee, now entering its fourth year, will be graduating its first cohort come July. The School has attracted top returning Israeli scientists, hundreds of students and at least one enthusiastic hospital director, Dr. Erez Onn, who says becoming associated with the School of Medicine has been one of the best things to ever happen to his Baruch Padeh Medical Center in Poriah.

School of Medicine students spend two years during their studies in one of the three hospitals affiliated with Bar-Ilan – Poriah just outside of Tiberias, Ziv in Safed, and the Medical Center of the Galilee in Nahariya. [The School is additionally affiliated with the Scottish Hospital and Italian Holy Family Hospital (both in Nazareth), and also works with Mazra Psychiatric Hospital in Acre and all the community clinics of Kupat Holim Clalit.]

Dr. Erez Onn

Rina Buxbaum is in her final year of medical school and is completing her clerkship in Nahariya. Originally from the Jerusalem area, the Nahariya facility’s relative small size attracted her.

“...The benefits are not just for the hospital;” Onn says. “It’s one of the best things to happen to the Galilee itself in the last 70 years. It has turned us into a full-fledged academic medical school, which means that everyone – not just the students but the doctors as well – is studying. Because you cannot teach if you don’t have the best knowledge. Our physicians are preparing lectures for the students and at least one enthusiastic hospital director, Dr. Erez Onn, who says becoming associated with the School of Medicine has been one of the best things to happen to his Baruch Padeh Medical Center in Poriah.

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Dr. Erez Onn

Rina Buxbaum

Orel Govrin is also doing his clerkship in Nahariya. For Govrin, it was a real homecoming: he grew up in Nahariya, but started medical school in Prague. Bar-Ilan’s School of Medicine is the only one in Israel that has a program specifically designed to bring students who started their studies abroad back to the country. Beyond that, “the medical center in Nahariya is now establishing many new and innovative medical services that do not exist at other hospitals in the north of Israel,“ he says.

Govrin is proud of being a pioneer. “As students, and as future doctors, we feel a great responsibility to offer proof to the quality and level of medicine that we learned here,” he adds.

That proof starts in Safed, where the School of Medicine is situated. And where Dr. Moshe Dessau is based. He is a senior lecturer at the school, with a PhD in biochemistry from Tel Aviv University. The fact that the School of Medicine is still new was very appealing for the Israeli-born Dessau, who had spent six years in the U.S. working on his post-doc at Yale University, before BIU enabled him to come home. Indeed the entire Dessau clan is perfectly on-board with the move to their new home.

This School is a kind of academic Zionism,” Dessau says. “We’re building everything from scratch: the network and labs. Since the majority of the faculty members are young researchers, we get to shape the academic environment as we would like it to be. We determine what will happen. This is actually one of the few opportunities in the world to build a new medical school from the ground up.”

Orel Govrin

Dr. Moshe Dessau

Dr. Orel Govrin of Poriah has also benefited from the emphasis on research that comes with being connected to the School of Medicine. “We now have labs in cardiology, nephrology, stem cell research and microbiology at the hospital,” he says. All this has made it easier to attract the best physicians in the country.

“We want to understand how these viruses work on the molecular level, so that in 10, 20 or 30 years, if there’s a big outbreak, we’ll have the tools to deal with it,” he says. “This is the drive in my lab.”

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Rina Buxbaum, studying in Safed was like being a new immigrant. “Everyone is so far from his or her family and friends, that it creates this very powerful micro-community,” she says. “The whole class would get together for Friday night dinners. It was the most social academic environment I’ve ever been in.” Buxbaum also hopes to make her career in the Galilee. “It’s just a question of what I get offered,” she says.

With the solid skills being taught through the Bar-Ilan University School of Medicine in the Galilee, Buxbaum and Govrin should have little problem joining Dessau and Onn as the next generation of Israeli pioneers – medical style.

Orel Govrin also plans to stay in the north following graduation. That’s not entirely surprising. His father established the plastic surgery unit in the same hospital where he is interning, and the younger Govrin would sometimes accompanying his father on rounds. Beyond that, “the School of Medicine was built not only to train future doctors but to contribute to the development of the Galilee,” he says. “It will improve the quality of medicine in the Galilee, which will in turn contribute to the patients, the hospitals and the community.”

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Rina Buxbaum

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BIU Lab Yields Life-Improving Medical & Scientific Innovations

Throughout the decades, BIU researchers in areas ranging from chemistry and the life sciences to engineering and nanotechnology have channeled their skills and creativity into producing breakthrough technologies and devices to improve health and quality of life. Among their impressive creations that diagnosis and fight disease, upgrade human functioning and help keep our environment clean and green are the following:

Blind Contact Lens Help the Blind See
BIU Engineering Prof. Zeen Zalevsky, in collaboration with Prof. Michael Belkin of Tel Hashomer, has developed a prototype contact lens to help the visually impaired see the world around them. The revolutionary device, which is worn like a regular contact lens, processes digital images and translates them into tactile sensations which can then be felt on the cornea, allowing the user to form a picture of the physical surroundings. The system uses a smartphone or mounted camera to capture images that are then transformed into a form of electronic Braille. The lens, fitted with electrodes, stimulates the cornea to enable the perception of objects around the wearer. Says Zalevsky, “It’s like reading Braille, not with your fingertips but with your eves.”

Fine-Tuning Technology for Improved Hearing Aids
Engineering Prof. Sharon Gannot develops and validates novel de-noise reverberation algorithms for binaural (two cooperating) hearing aids which can reduce undesired noise, resulting in a greater hearing capability and even, enhanced spatial impression. For 35%-50% of seniors aged 65 and older who suffer from hearing loss, this frontier research offers promise for minimizing disturbing background noise and reverberations that impede the efficacy of their hearing aids.

Bacteria-Safe Fabrics
Chemistry Prof. (Emeritus) Aharon Gedanken, Director of the Kanbar Laboratory for Nanomaterials at the Bar-Ilan University Institute of Nanotechnology and Advanced Materials (BINA) has devised a revolutionary way to coat fabrics and textiles used in hospitals with anti-bacterial nanoparticles to counter infections that can sometimes prove fatal. The European Union is financing Gedanken’s 17 textile manufacturers, universities, and government agencies in England, France, Italy, Spain, Russia, Romania, Bulgaria and Poland, all working to commercialize his technique. The program is nearing completion of its first milestone: the building of two large machines that can spray the nanoparticles using ultrasonic waves on fabric (polyester, cotton, wool, nylon, polyethylene, and even aluminum foil and supermarket bags) up to 50 centimeters in width. Embedding nanoparticles into the very fibers of the fabric ensures that the anti-bacterial properties last up to 70 cycles in industrial hospital washing machines.

Fill ‘er Up with... Cooking Oil!
Just 10 seconds – that’s how long it takes Prof. Aharon Gedanken to transform waste cooking oils into biodiesel! Visiting chair professor at National Cheng Kung University in southern Taiwan, Gedanken has devised a unique patent-pending microwave-based process to convert biomass to biofuels. “Actually everyone can do it on a small scale in their home kitchen with a domestic microwave and a certain catalyst, which can be removed and recycled to carry out ten times the same reaction,” he relays. He is optimistic that his method can be adopted for large-scale industrial conversion of cooked oils (which may otherwise pose an environmental challenge) into biodiesel. “It is hoped that this will be the replacement for fossil oil in the future,” says the BIU scientist, named as one of the ISI’s Highly Cited Researchers.

Rechargeable Lithium and Magnesium Batteries
Prof. Doron Aurbach, of the Department of Chemistry and BINA, runs a lab that specializes in novel devices for energy storage and conversion, including rechargeable lithium and Li-ion batteries and super (EDL) capacitors, as well as rechargeable magnesium batteries. He is helping to facilitate a worldwide revolution in electric cars through cooperation with leading companies such as General Motors and the German chemical company BASF. As winner of the prestigious 2014 Ernest B. Yeager Award from the International Battery Association, Aurbach was recognized for his lifelong contributions to the development of alternative power sources.

Aluminum-Air Battery for Electric Cars
U.S. President Barack Obama and Israeli Prime Minister Benjamin Netanyahu learned about the BIU Aluminum-air battery for electric cars from its developer, Prof. Avie Zaban, the then BINA director. They met at the Tech Expo held during the President’s 2013 visit to Israel. Phinergy, a startup company, has acquired the technology rights to the battery.

BIU Researcher First to Observe “God Particle” Analogue in Superconductors
Research by BIU physicist Prof. Aviad Frydman and his colleagues has led to their observation of a new “Higgs mode” in superconductors that could make it easier for scientists to study the still-controversial “God particle” – the elusive “missing link” in the Standard Theory of particle physics believed responsible for imparting mass to all the matter in the universe. Thanks to this new approach, it may soon be possible to solve long-standing mysteries of fundamental physics, through experiments conducted not in a multi-billion dollar accelerator complex, but on a laboratory tabletop. Prof. Frydman directed the study together with an international collaboration that also included other research teams from Germany, Israel, India, and the United States. Doctoral student Daniel Sherman, a member of Frydman’s laboratory, conducted much of the investigation and is listed as the publication’s first author.

Gonda Brain Center Scientists Literally Change the Way We Think
In a new study published in the Proceedings of the National Academy of Sciences and supervised by Prof. Moshe Bar, Director of the Gonda (Goldschmied) Multidisciplinary Brain Research Center, BIU scientists are the first to demonstrate how an external stimulus of low-level electricity can literally change the way we think, producing a measurable up-tick in the rate at which daydreams – or spontaneous, self-directed thoughts and associations – occur. Along the way, they made another surprising discovery: that while daydreams offer a welcome “mental escape” from boring tasks, they also have a positive, simultaneous effect on task performance. The study, designed and executed by Prof. Bar’s post-doctoral researcher Dr. Vadim Axelrod in the Cognitive Neuroscience Laboratory, is the first to prove that a generic external stimulus, unrelated to sensory perception, triggers a specific type of cognitive activity. The research was funded, in part, by the Israeli Center of Research Excellence in Cognition (ICORE).

Using Gold Nanoparticles to Track Cancer Cells
Says Zalevsky, “Mimicking nature, molecularly targeted nanoparticles are revolutionizing cancer detection, diagnosis and therapy.” Novel research in molecular imaging, conducted by Prof. Rachela Popovetz, of the School of Engineering and BINA, has yielded exciting results. She has found that injecting a mouse with targeted gold nanoparticles sharply enhances tumors, offering a method that should significantly improve the ability to detect tumors in humans.

Helping Medicine Battle Resistant Tumors
Prof. (Emeritus) Benjamin Srednicki, former Chief Scientist of the Israeli Ministry of Health, who heads BIU’s Cancer, AIDS and Immunology Research (CAR) Institute, has developed a potential solution that uses a synthetic non-toxic compound called AS101, first synthesized by Chemistry Prof. Michael Albeck. AS101 can overcome tumors that are resistant to chemotherapy, thereby sensitizing them so that they become responsive to treatment. In addition to anti-cancer and anti-infectious effects, immunomodulators such as AS101 and SAS have shown measurable up-tick on several autoimmune (e.g. lupus, diabetes) and neurodegenerative (e.g., Alzheimer’s, Parkinson’s) diseases.

Extension of Healthy Lifespan
A team led by Prof. Haim Cohen, of BIU’s Bina and Everard Goodman Faculty of Life Sciences, and including researchers from Hadassah Medical Center, the Hebrew University, and Carnegie Mellon University, has discovered a gene that increases survival in mammals. The discovery increases the likelihood that similar activity can be found in a human gene. The team’s research was published in the prestigious journal Nature. Prof. Cohen was awarded the “Leon and Maria Tauber Prize for Innovation in Medical Research” [2013/2014] for his research on extension of healthy lifespan. The research could have consequences by preventing the physiological damages of obesity and diabetes.
Six Women Who Embody Leadership at Bar-Ilan University

Prof. Yaffa Zilbershats was the first woman to hold the position of the Dean of the university’s Faculty of Law. A specialist in international, constitutional, and human rights law, her research deals, among other issues, with immigration and refugees laws. She is a member of several public prestigious boards, including the Israel Democracy Institute and the International Association of Jewish Lawyers and Jurists. She has also served on Israeli blue-ribbon committees, including the Committee for the preparation of citizenship legislation, the Rubinstein Committee for reviewing Israeli immigration and citizenship laws, and the Keshef Committee for equality in military and civil service.

Harvard University educated mathematician Prof. Malka Schaps moved to Israel in 1972 and has been at Bar-Ilan University since 1977. A scholar whose interests include “tilting theory” and “data science for finance,” the multilingual Schaps speaks English, Hebrew, French and German, and reads Italian, Spanish and Biblical Aramaic. She is now the dean of the Faculty of Exact Sciences. The multi-talented Schaps (she has also written a number of novels under a pseudonym) is a lecturer on the mathematics speaking circuit and is an officer of the Harvard Club of Israel.

Prof. Shulamit Michaeli is the dean of the Mina and Everard Goodman Faculty of Life Sciences and a world-renowned expert on designing and synthesizing RNA-protein complexes that inhibit the function of certain deadly genes, particularly in parasites. Using her revolutionary “RNA silencing” techniques, she is at the forefront to find a cure for devastating parasitic diseases such as sleeping sickness, leishmaniasis (carried by the sand fly and which causes between 12,000-50,000 deaths a year) and Chagas’ disease – spread by what’s known as “the kissing bug,” it affects up to eight million people in Central and South America.

Dean of the Faculty of Humanities, Prof. Shifra Baruchson-Aribb is a BIU alumna (Jewish History, PhD cum laude, 1986). An expert in the history of communication means, social information science, info-ethics, and information behavior, she founded the field of “social information science,” establishing BIU’s Department of Information Science in 1990. An expert in the history of the Hebrew book, she is the author of three books and 60 papers, among them Books and Readers for which she received the Zalman Shazar Prize for Outstanding Research in Jewish Studies in 1993. Baruchson-Aribb is a member of the Royal Society for Encouragement of Art, Manufactures & Commerce in London.

The dynamic director of the Midrasha in the Ludwig & Erica Jesselson Institute for Advanced Torah Studies, Dr. Tova Ganzel completed her PhD in BIU’s Zalman Shamir Bible Department and is one of Israel’s first trained yo’atzot halakha (women’s halakhic advisors). A former Tikvah Fellow, she is the recipient of a number of other prestigious academic awards and grants. She has published over 20 articles, book chapters and encyclopedia entries and is the author of A Visionary’s Oracles – From Destruction to Restoration, Studies in the Prophecies of Ezekiel (Tevunot- Herzog, Alon Shvut 2012). A highly sought-after lecturer, Dr. Ganzel frequently addresses international scholarly conferences and seminars.
As Bar-Ilan University celebrates its 60th landmark year, we take a close look at some of the BIU “dynasties” that have been an integral part of the academic landscape from our early days. We take pride in these well-rooted family traditions of excellence and commitment which have made their mark felt throughout the years and continue to inspire. As the mantle of leadership shifts from one generation to the next, we offer a sampling below.

**Founding Father: Founding Daughter**

A prominent American educator, scholar and religious Zionist leader with a rabbinic degree, Prof. Pinkhos Churgin founded Bar-Ilan University in 1955, serving as its first president. “We want, through Bar-Ilan University, to train a cultured generation in Israel, intellectual leaders, who at the same time will be based and rooted in Judaism,” said Churgin.

BIU’s visionary architect envisaged “an institution of excellence that will strive to implant within the heart of each student an unswerving faith in the unity of our people with all of its diversity…” in April 1956, Bar-Ilan’s first buildings were dedicated by President Churgin with the participation of Israeli President Yitzhak Ben-Tzvi. Tragically, Prof. Churgin died shortly after the university’s third-year opening ceremony in 1957. Today, Churgin’s vision in entirety – and beyond – has become reality.

Following his lead, Prof. (Emerita) Bathia Churgin has made her own resounding contribution to the university. In 1970, the noted musicologist established BIU’s Music Department as a personal tribute to her late father, Prof. Pinkhos Churgin. “My father always appreciated fine music. In this he was influenced by my highly supportive mother, Shoshana Churgin, a violinist and violin teacher, as well as by me. He respected the discipline and hard work required by the field of music. He wanted Bar-Ilan to be a center of learning – not only of Torah and the sciences, but also the arts and humanities.”

As founding department Chair she played a key role in designing degree programs, strongly supporting the music therapy specialization, developing the holdings of the music library and creating a successful concert series. Active in university affairs, she was the first woman elected to the Senate committee dealing with appointments and programs. What a fitting repertoire for the daughter of the BIU visionary!

Prof. Pinkhos Churgin’s older daughter, Prof. (Emerita) Naomi Churgin Miller, has been an ardent supporter of the university. The longtime Chair of the History Department of Hunter College of City University of New York, she has carried on the academic and Zionist tradition of the family, as has her son, historian Prof. Peter N. Miller.

**Father and Daughters: Contributing to Society in their own Way**

Prof. Menachem Zvi Kaddari was an eminent Hebrew scholar and linguist, whose research embraced all periods of the language. In 1999, he was awarded the Israel Prize for Hebrew Linguistics. Teaching at BIU from 1951, he served as Dean of the Faculty of Humanities and university Rector. He taught abroad at UCLA, the University of Leeds, the University of Witwatersrand, Johannesburg, and other institutions. Elected a member of the Hebrew Academy in 1973 and its vice president in 1994, Kaddari’s major fields of research were Aramaic, Hebrew syntax, Biblical and Rabbinic Hebrew, and, mainly, Modern Hebrew.

During World War II he was active in the clandestine pioneering Zionist movement in Hungary and later in the ma’pilim (“illegal immigration”) camps in Cyprus, where he also taught Hebrew. Prof. Kaddari’s three daughters, all BIU grads and all in some way connected to the university today, are making their own great strides in their contributions to Israeli society.

Ruth Halperin-Kaddari, an esteemed professor in her own right, is founding director of the Ruth and Emanuel Rackman Center for the Advancement of the Status of Women in BIU’s Faculty of Law. She has been elected to an unprecedented third term on the UN Committee for the Elimination of Discrimination against Women (CEDAW). In her past eight years on CEDAW, she has initiated the adoption of a new General Recommendation on the Economic Consequences of Family Relations and their Dissolution.

“I was interested in the interface of religion and state in the context of women’s law,” notes the recipient of the US State Department’s International Woman of Courage Award. "I saw a unique challenge in this area because there wasn’t a single woman who taught family law,” says Halperin-Kaddari, who has published extensively on women’s human rights and family law. A prominent voice in the religious feminist sector in Israel, she was one of the founders of the feminist organization Kolech. In fact, the initial meeting of religious intellectual women who wanted to see a change in the religious map was held at the home of Halperin-Kaddari’s parents. Recognition of her public and activist work won her the Katan Award for the Advancement of Gender Justice through Voluntary Work recently (among numerous academic distinctions and grants that she has received). Halperin-Kaddari credits her father for providing a legacy of voluntary work and commitment to public activism in times of crisis.

“I'm a classic case of the young daughter who becomes the focus of all the ambitions of the father who has no sons,” says Halperin-Kaddari. “From...
All in the BIU Family

a young age it was clear to me that, no matter what field I chose, I would become a professor. I was naturally drawn to his university," adding that "to this day, the most moving moments are when at the end of a talk or a class, I am approached by someone from the audience, who tells me she or he had the privilege of having my father as their teacher, and always praising him for his patience and gentleness with his students, describing him as a ‘mensch’. As time goes by, there are more who come to tell me that their mother or father were my father’s students."

A sentiment echoed by Halperin-Kaddari’s sister, Dr. Michal Ferenz- Kaddari, a clinical psychologist and supervisor and qualified art therapist who both practices and teaches ethical and professional practices for therapists, as well as heading the ethics committee of the BIU Department of Psychology. She has used her art therapy skills in her work in Kedeh, where “using nonverbal art tools, women could explore their inner barriers to become more confident and independent,” she says. “I am proud to be continuing my family’s longstanding connection with the university.”

“Bar-Ilan is clearly a household name. Prof. Jean-Paul (Moshe) Lellouche, a French immigrant who joined BIU in the year 2000, is an active member of the Department of Chemistry and the Bar-Ilan Institute of Nanotechnology and Advanced Materials (BIINA). He explores the chemical design, fabrication and characterization of a wide range of functional nanomaterials for energy, biomedicine, and (bio) sensing-driven applications. His oldest son, Jonathan, worked with him and BIU’s Prof. Abaron Gedanken and Dr. Ehud Banin on developing novel antibacterial nanoparticles while pursuing his doctorate in biochemistry. Another son, Emmanuel, a PhD candidate in biochemistry, collaborates with him and BIU’s Prof. Shulamit Albeck, using ultra-small iron oxide-based nanoparticles as a nanoscale delivery platform for silencing genes in pancreatic cancer cells. Emmanuel’s wife, Dr. Miri Ben Dahan-Lellouche, a scientific advisor to a patent law firm, holds an MBA and a PhD in organic chemistry and molecular biology from the university. Her dissertation revealed the pathway of the active mechanism of an anti-cancer substance extracted from a common medicinal plant. The Lellouche family, Bar-Ilan is clearly a household name. Dr. Shulamit Albeck, a clinical psychologist and supervisor and qualified art therapist who both practices and teaches ethical and professional practices for therapists, as well as heading the ethics committee of the BIU Department of Psychology. She has used her art therapy skills in her work in Kedeh, where “using nonverbal art tools, women could explore their inner barriers to become more confident and independent,” she says. ‘I am proud to be continuing my family’s longstanding connection with the university.’ Biu prof. emeritus shalom albeck (Michael’s brother), former dean of the faculty of law, is a scholar, jurist and historian, and noted authority on hebrew law, known for his many books on the legal system of the talmud, including introduction to jewish law in talmudic times, essays in the halakha and its history, and the principles of marriage and family law in the talmud. Dr. Rachel Albeck-Gidron (Shalom’s daughter) is a senior lecturer in Biu’s department of literature of the Jewish people. She teaches on modern and postmodern hebrew literature, continental philosophy, as well as aesthetics and poetics. A graduate of BIU’s department of comparative literature, she received all three degrees with distinction.
Why do new immigrants from North America choose Bar-Ilan over some of the other top-notch Israeli universities? For Arieh Friedman, 24, and twin sisters Esther Shafier and Batya Karp, 22, it was all about community.

“T’d heard there was an English-speaking community and that it was very megubash [close-knit], welcoming and helpful,” explains Esther, who moved to Israel with her sister in high school. “There’s a different atmosphere here than on other campuses,” adds Batya. “There are lots of other religious English speakers at Bar-Ilan. Here people often get together on Shabbat, which is very nice.”

Arieh, who came to Bar-Ilan after serving two and a half years in the IDF’s Golani brigade, first as a combat soldier and then as an intelligence officer, puts it this way, “Ever since I moved to Givat Shmuel [the residential neighborhood adjacent to the Bar-Ilan campus], I’ve had a feeling of being at home. It used to be, every time I’d come back from the U.S. after a visit, I’d be homesick, but since I’ve moved here, that’s gone. Bar-Ilan has become like family.”

Finding that sense of community has been especially important for Esther, Batya and Arieh, since all three made aliya without their families. Esther and Batya’s story is the most surprising: The twins were joking around in their family’s Teaneck, New Jersey kitchen one day in ninth grade, when their mother suggested they consider finishing high school in Israel. “It was really just a joke,” Batya says. “We had never even visited Israel before, but our brother piped in that it was very megubash [close-knit], welcoming and helpful,” explains Esther, who moved to Israel with her sister in high school. “There’s a different atmosphere here than on other campuses,” adds Batya. “There are lots of other religious English speakers at Bar-Ilan. Here people often get together on Shabbat, which is very nice.”

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Arieh Friedman’s path to Israel and Bar-Ilan was more “usual.” Originally from West Hempstead, New York, he came to Israel to study in yeshiva for the year after high school. “I had been here many times before, both with my family, visiting siblings who were here, or with my school. I always knew I wanted to live here,” he explains. “In my high school, there was always at least one person from every graduating class that went into the IDF.”

Arieh’s major is in business and he has a very specific goal. “I’d like to open my own restaurant some day,” he says. He’s already on his way: Arieh currently works as the sous chef at Papagaio, a well-known high-end Brazilian meat restaurant in Tel Aviv.

The restaurant of his dreams would be similarly meaty. “What I’ve discovered is that there’s not so much of a native Israeli cuisine. Rather, we tend to take all kinds of other dishes – be it Asian, French, American – and kick it up a notch here. I’d like to double down on those efforts, to put together in a single restaurant all the meats of the world.”

In the meantime, he’s cooking for his fellow students at Bar-Ilan and for lone soldiers in the area. Arieh is the co-organizer of the Givat Shmuel branch of the Lone Soldier Center in Memory of Michael Levin, who was killed in the Second Lebanon War. In addition to the satisfaction of giving something back after the support Arieh received when he was in the army on his own, the lone soldiers have formed their own warm and welcoming community.

For Anglo immigrants at Bar-Ilan, where community can be just as important as academics, Bar-Ilan offers a full pot of comfort foods for both the heart and the brain.
Ever considered learning neuro-linguistic programming (NLP), bio-feedback or cognitive behavioral therapy (CBT)? Want to pursue training in PAIRS (Practical Application of Intimate Relationship Skills), a worldwide system designed to improve marriages and sustain intimate relationships? Or maybe you just want to master how to build a website? These courses, along with 20 others, are offered by the Churgin School of Education’s Department of Professional Development.

Available to both teachers and the general public, the department has for 44 years been dedicated to providing academic enrichment classes, certificate programs, conferences and professional seminars for educators. All courses are approved and supervised by the Ministry of Education and many grant continuing education credits. Each year, some 2,500 students are enrolled in the program.

“What all the courses have in common,” says department director Haim Marciano, “is the spirit of education. Our motto is ‘lifelong learning’ and learning throughout the lifecycle.” Academic head Dr. Ruth Birger adds that the department effectively serves as a “bridge between academic studies and the field of education itself.”

A unique program within the department that epitomizes its role as a “bridge” is the Inclusive University, where students from the Beit Issie Shapiro center for children with disabilities are able to learn on the Bar-Ilan campus in an academic setting. The program, in place since 2001, promotes social integration and helps to alleviate a lifelong sense of alienation. In 2008, for the first time, an Inclusive University participant was accepted into a mainstream course at BIU as a result of the program. From the teacher side, a separate course trains educators in how to use pets to work with children with disabilities through what’s known as “animal-assisted therapy.”

The department also offers nine courses that are entirely online. These include “Mindfulness as a Way of Life,” a course on nutrition called “Eat Wise and Be Healthy,” “Jewish Ethics,” and the provocatively titled “What the Drug Dealer Won’t Tell You: Drug Myths and Facts.”

Cognitive Behavioral Therapy has been becoming increasingly popular in recent years, and Bar-Ilan is the only place in Israel where MA students can receive a full certification in CBT while studying for their degree in counseling at the Churgin School of Education. In addition, BIU offers the only university-based medical clown course in Israel – students must write a paper before receiving their diplomas. Research has been published on the efficacy of medical clowns in calming and relaxing patients, with the result that many hospitals and other institutions in Israel are increasingly “employing” them.

The educators of tomorrow need the latest tools and knowledge, not to mention some creative stimulation and Bar-Ilan University’s Department of Professional Development has just the course.
Over the years, Bar-Ilan University has initiated an exciting array of programs that strengthen our bond with institutions, researchers, students and professionals around the globe. A sampling appears below:

**IMBA Trains Start-Up Nation Innovators**
Our International MBA program continues its proven track record in translating the special qualities which have fueled the Israeli business and entrepreneurial machine into a global academic program. Through a grant from the Israeli Council of Higher Education, the program now also welcomes an impressive cohort of students from China. The IMBA, which includes many new courses and a study tour in China, places BIU at the forefront of producing the next generation of Start-Up Nation innovators.

**BIU–YU Summer Internship**
Taking time out from their daily lab research in chemistry, life sciences, engineering, brain studies, and other fields, 2014 BIU-YU Summer Interns tour the Teva pharmaceutical production plant (pictured above). The program includes half-day trips to Israeli high-tech facilities and weekly group lunches with BIU experts in diverse fields. While most of the interns are from Yeshiva University, the group also includes students from Cornell, Cooper Union, Queens College, UCLA, and the University of Toronto.

**International BA Programs Taught in English**
Harnessing its unmatched experience with immigrant and overseas students, Bar-Ilan is the first Israeli university to offer degree programs entirely in English! Close to 100 students study for three years under the guidance of professors from Israel and abroad in three programs: Communication (Public Diplomacy, Public Relations, and Marketing), Micro (Sociology, Criminology, Psychology), and Economics and Business Administration. Meanwhile, BIU continues to be a hub for new immigrants who find the supportive staff and family-like atmosphere of the university particularly inviting. Well over 1,000 students from around the world pursue undergraduate and graduate studies in a range of academic disciplines, in the regular Hebrew-language academic learning frameworks.

In summer 2014, the university opened its new International Office for Academic Affairs as the central unit for initiating and coordinating the internationalization of its study programs and courses, as well as for enhancing Bar-Ilan’s participation in multinational exchange programs such as Erasmus Plus and Euraxess. BIU plans to launch its International School in summer 2015 and additional English-language programs are to be instituted in the coming years.

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**The Israel Experience**
Touring Jerusalem’s Old City, Israel XP participants stop to pose on a rooftop overlooking the Western Wall (pictured above, left). BIU’s popular gap-year program for high school grads combines Jewish learning with college courses, trips across Israel and uplifting Shabbatons.
Ask Rabbi Shlomo Brody
BIU PhD Student Publishes Award-Winning Book

In June 2014, following the horrific revenge murder of a Palestinian teenager in Jerusalem, Rabbi Shlomo Brody wrote a column in The Jerusalem Post called “Is Revenge a Jewish Value?” Brody had 900 words to try to encapsulate thousands of years of Jewish thought, from passages in Deuteronomy and Isaiah, to the great Sages of the Talmud, medieval commentators and contemporary rabbis.

“We must remain watchful that our actions stem from calculated judgments of justice, and are not rash expressions of pain and anger,” Brody concluded, breaking the non-partial stance that has been the watchword of his “Ask the Rabbi” column for the past seven years in the paper’s Friday magazine.

Brody is now taking his research into Jewish Law a notch up as he pursues a doctorate in law at Bar-Ilan University. “Bar-Ilan has the best department in the world for people interested in the intersection in general legal theory and Jewish Law,” he says. His dissertation – “May Later Scholars Amend Rabbinic Law?” – is bound to ruffle a few more feathers.

Brody grew up in a Zionist family from Houston, Texas. He came to Israel to study in yeshiva after high school, fell in love with the country and knew he had come back. First, though, he received a degree in Near Eastern Languages and Civilizations from Harvard. He made aliyah in 2001, and subsequently received rabbinic ordination from the Chief Rabbinate in Israel. He has taught Talmud, Jewish Law and Bible Studies full time at Yeshivat HaKotel in Jerusalem, is a junior research fellow at the Israel Democracy Institute, and runs programs for the Tikvah Fund.

If there is a theme underlying his many academic, journalistic and professional pursuits, it is “creating a more meaningful conversation about how Zionism and contemporary life can give a more profound understanding of Torah.”

If that’s not clear, you can always “Ask the Rabbi.”

Bar-Ilan Alumni
Making an Impact Around the Globe

What do an IDF chaplain and academic, an internationally-renowned conductor and brain researcher, a former high-tech leader turned Michal Negrin franchise owner based in Palma de Mallorca, a Druse educator, a stem-cell researcher heading a sports medicine clinic lab in Toronto, the export manager at AHAVA Dead Sea Laboratories, and an Israeli basketball star doing her post-doc at Johns Hopkins School of Medicine have in common? These exceptional men and women are all BIU alumni, making their impact around the world. In this expanded alumni section we are proud to include their stories.

Dr. Joav Avtalion
From NICE to Negrin – a Philosophical Journey

When Joav Avtalion – one of Israel’s most prominent high-tech leaders – decided to step off the fast track to study philosophy at Bar-Ilan, it may have raised some eyebrows. But according to Avtalion – co-founder and senior technology executive of NICE Systems, a market-leading enterprise and security technology executive of NICE Systems, a market-leading enterprise and security solutions company, as well as the driving force behind a number of other successful business ventures – the link between the mind, the spirit, and human behavior has intrigued him from the very beginning.

“When I began my academic journey I had no idea where it would take me,” Avtalion says. “I look upon my time at Bar-Ilan as one of the best periods of my life.”

Today, Avtalion lives in Palma de Mallorca, the capital of the Balearic Islands off the coast of Spain. In addition to bringing Israeli commerce to his adopted home – through his ownership of a franchise for stores that sell the work of Israeli jewelry designer Michal Negrin – Avtalion provides individual and group coaching services that draw on his life experience, as well as his philosophical training.

“We know that nobody can function without having a healthy spirit, and at some point we all have to ask ourselves: why do we exist?” Avtalion asserts, adding that study of the humanities – like that he took upon himself at Bar-Ilan – is of utmost importance for a healthy society. “Even if universities cannot supply all the answers, they must continue to provide a place for students like me – to keep asking questions.”
IDF Chaplain, Rabbi Dr. Tsuriel Rashi
Probing Media, Judaism & Ethics

As associate director of the Center for Media and Religion in BIU’s School of Communication, Rabbi Dr. Tsuriel Rashi is generally focused on mass media (“a major social agent in our lives,” he says), professional ethics (for example in the military, education, and police) and Judaism. But during Operation Protective Edge in the summer of 2014, he found himself in his “other” role: IDF chaplain of the Golani Infantry Brigade. Receiving an emergency call-up notice, the Captain of the Golani Infantry Brigade. Receiving himself in his “other” role: IDF chaplain. Edge in the summer of 2014, he found himself in his “other” role: IDF chaplain. Receiving himself in his “other” role: IDF chaplain.

“In the first 24 hours following the onset of the ground operation, there were casualties almost every 30 minutes,” he recalls. “After about 36 hours the physical and emotional strain was immense, especially when I discovered that a former student of mine (whom I had just seen) had been killed in combat.”

The Nesher yeshiva grad, who received semicha from Rabbi Haim Drukman (head of Yeshivat Bnei Akiva) and semicha from Rabbi Haim Drukman, teaches books and articles, and presented papers at professional conferences abroad on such subjects as the Jewish perspective of freedom of speech and interfaith dialogue, Israel’s Ultra-Orthodox community and modern media, journalistic ethics codes vs. Jewish law, the media’s evolving influence on Jewish response regarding the freeing of agnont, and media memory agenda and Holocaust denial. He teaches rhetoric and public speaking as well as professional ethics in academic institutions and programs at the IDF, Israeli police, the Prime Minister’s Office and the Ministries of Foreign Affairs and Defense.

Noting the “huge difference between halakhic and ethical attitudes toward information-sharing with a journalist,” he says that according to Jewish law, “a conversation is off-record unless the source told you specifically otherwise, whereas the opposite is true with regard to the journalistic ethical code.”

Aspiring to impact the public discourse and ethical conduct in diverse fields, Rabbi Dr. Rashi imparts: “Today I mainly focus on professional and Jewish ethics and not just on communication. I view it as my mission to connect these two worlds which are so close to my heart.”

A concert pianist and conductor who has performed and given master classes worldwide, Dr. Eitan Globerson uniquely synthesizes his distinguished music career with a novel scientific quest at BIU’s Leslie and Susan Gonda (Goldschmied) Multidisciplinary Brain Research Center, where he received his PhD in 2012. Currently affiliated with the center’s Magnetoencephalography (MEG) laboratory – the only one of its kind in Israel – the postdoctoral researcher probes the perception of melody, using state-of-the-art imaging to track brain responses of normal individuals to pitch, rhythm, loudness, timbre (tone quality) and other auditory attributes.

“I like the Gonda Center’s interdisciplinary orientation, its uncompromising level of research and productive dialogue between experts in the psychological and computational areas associated with brain sciences and linguistics,” says Globerson, whose lead BIU supervisor is Prof. Avi Goldstein.

His PhD dissertation, which resulted in two scientific papers, examined prosody (the rhythmic and intonational aspect of language) in individuals with autistic spectrum disorders (ASD). His findings show that there is a strong association between the ability of people (particularly in the autistic spectrum) to distinguish between close frequencies in musical tones, and their ability to recognize emotion in voice.

Because of the interdisciplinary nature of his PhD research, he had a total of four supervisors, including BIU’s Prof. Michael Lavidor, head of the Cognitive Neuroscience Lab and Dr. Ofer Golan, of the Department of Psychology, as well as two faculty members from the Department of Communication Disorders at Tel Aviv University’s Sacker Faculty of Medicine. Initially a physics and math major when he embarked upon his academic career, he switched after one year to music, and later, opted to pursue a degree in brain science. “It was very challenging but then again music is also a demanding profession,” notes Maestro Globerson.

Goog solo with his dual expertise in music and brain science, Eitan Globerson is a hard act to follow as he broadens our grasp of music cognition and psychoacoustics and masterfully performs as BIU’s foremost “neuro-pianist.”

"As a professional concert artist to optimize practice and performances. "While not directly related to my BIU research, this work – like my other brain research – is a result of my studies at the Gonda Center, and the knowledge I gained here.”

Bar-Ilan Alumni: Making an Impact Around the Globe

Maestro Dr. Eitan Globerson conducting the Mendel Rubin Symphony Orchestra (Photo: Jonathan Dror, Jerusalem Academy of Music and Dance)

Maestro Dr. Eitan Globerson conducting the Mendel Rubin Symphony Orchestra (Photo: Jonathan Dror, Jerusalem Academy of Music and Dance)
A proud alumna who holds a BSc in physics and also completed BIU’s diploma course in international sales, Hermina Shiff speaks Spanish, German, Russian, Ukrainian, Polish and Romanian, in addition to English and Hebrew. But after 17 years as export manager for Israel’s most famous cosmetics firm, Schiff is also proficient in the language of love.

“AHAVA means love in Hebrew, and at AHAVA Dead Sea Laboratories we export products people love to 25 countries,” says Shiff, who was born in the Western Ukraine and immigrated to Israel as a teenager. “It helps that I can move easily from one language to another.”

The descendant of Vizhnitz Hassidim, Schiff chose Bar-Ilan for its academics, as well as for the vibrancy of Jewish life on the BIU campus. One member of the Jewish community, in particular, caught her eye.

“As the only woman studying physics, I used to hang out with friends in the chemistry department,” she says. “That’s where I met my husband, Avner, a native Israeli. He started out tutoring me in chemical subjects, but a different kind of ‘chemistry’ soon developed! Avner was called up during the Yom Kippur War, but we married on the steps of the Chief Rabbinate while he was on 24-hour leave. He wasn’t discharged until the following May.”

After working as a chemist for Israel Military Industries, Shiff’s husband passed away eight years ago, at the age of 57. The couple’s daughter, Shlomit, has carried on the BIU connection, graduating with a degree in economics and logistics in 2005.

“Just like my experience as a student, my daughter has made wonderful friends at Bar-Ilan,” Schiff says. “The training we received from the university formed the basis of our future success. That’s why I’m so proud to see BIU still going strong – and growing – on its 60th anniversary.”

Brokhman explains how personalized, regenerative medicine can get injured athletes back onto the playing field – fast. “Traditional sports injury treatment relies on RICE – Rest, Ice, Compression and Elevation – and anti-inflammatory drugs,” she says. “But we can make healing faster and more effective through the localized injection of self-extracted platelets and stem cells. Anchored in place by a tiny amount of fat also extracted from the patient, this minimally-invasive procedure jump-starts the medicinal signaling necessary for natural tissue repair.”

Belarus-born Brokhman — who made aliyah in 1990 — has been fascinated by developmental biology ever since her Masters at Tel Aviv University. For her doctorate, however, Brokhman says that Bar-Ilan University was the obvious choice.

“My PhD supervisor, BIU Prof. Ron Goldstein, is a recognized leader in the stem cell field,” she says. “I believe that stem cell-based therapies have great potential, not just for sports medicine, but also for the treatment of currently incurable diseases. Through my research, I hope to help these technologies become part of standard medical practice.”

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Dr. Randa Abbas
A Trailblazer in the Druse Community

Dr. Randa Abbas is a trailblazer. But when you ask her about her many accomplishments, she quickly changes the subject. “My success is not what I’ve done but how it is has influenced my daughters, my students and others in my community,” she says.

In 2007, Abbas became the first Druse woman to receive a PhD from Bar-Ilan University. Today she teaches at the Western Galilee Academic College, where she earned her BA and MA degrees and, at just 42-years-old, she is the dean of the Academic Arab Education College in Haifa.

But it is her daughters about whom she is most proud: her oldest is finishing her degree in pharmacology at Hebrew University; her 17-year-old spent a year studying abroad and plans to enroll in law after completing her national service in Israel.

It’s not just her children. “My students, including those who are Jewish, tell me I’m a role model,” she says. None of this would have been possible if Abbas had not pushed the boundaries of the conservative community she grew up in. “In order to improve yourself, you need to go into academia,” she explains. “Once you have those tools, you can influence not only our own family, but an entire society. It’s especially important to encourage women to move beyond their usual circles, to go out and learn.”

It wasn’t always easy and it took time for her community to accept her. “I was like a rebel,” Abbas recalls.

Abbas chose Bar-Ilan University in part to get out of the Galilee, where she grew up and still lives, to experience life in the big city, and in part because “I felt Bar-Ilan was something similar, like my community. People told me I was crazy,” she laughs. “Why didn’t I just drive to Haifa, only an hour away, instead of to Tel Aviv, which can take up to four hours in the car, they’d say?” But I wanted to hear other opinions, and to let people in the center of the country know about the Druse community.”

Abbas’s commute has clearly paid off and her students, family and community have much to be proud of – as does Bar-Ilan University, of Dr. Randa Abbas and her pioneering achievements.

Dr. Tal Salz
From Basketball Pro to Cancer Researcher

When choosing a university for her undergraduate studies, Dr. Tal Salz had two criteria. First, she was looking for an excellent biotechnology program. Second, she needed a location that would allow her – when not in the lab – to continue her career as a professional basketball player. Bar-Ilan – situated not far from the three Israeli cities for which Salz played while enjoying a multi-year stint as captain of the women’s national team – was a slam dunk.

“I attended classes in the mornings, and studied at night or on the way to games,” Salz recalls. “It was no picnic, but I have always enjoyed a challenge.”

Salz – a dual Israeli-American citizen who grew up on Kibbutz Mahanayim – soon fell in love with the challenge of scientific research. After graduation, she moved to the U.S., where she worked in a microbiology lab before being admitted to a PhD program in Medical Sciences at the University of Florida. Today, she is a post-doctoral researcher at Johns Hopkins School of Medicine.

“My interest is cancer epigenetics – a field which focuses on how non-genetic factors lead to changes in gene expression and biological function,” she says. “Specifically, I address the question of how genome-wide modulation of histones – conserved proteins critical for ‘packaging’ DNA into the nucleus – contribute to the progression of cancer. My ultimate goal is to apply epigenetic strategies towards the development of novel therapeutic applications.”

Salz asserts that, like basketball, science requires single-minded focus. “I knew I could not sustain both careers,” she says, adding that academic pressure, as well American rules barring professional athletes from college basketball teams or even intramural sports, brought her athletic career to a close. Still, she says, she has no regrets. “My passion for science – something I discovered at Bar-Ilan – has opened up a whole new playing field.”
BIU Prof. Pnina Klein, winner of the 2011 Israel Prize in Education Research, died in November following a battle with cancer. She was 69.

Prof. Klein, of the Churgin School of Education, was one of the world’s premier experts in early childhood education. Her research made important contributions to the field in Israel and around the world. She devoted most of her 40-year career to developing methods for assessing the quality of adult-child interactions in early childhood and for translating them into intervention programs designed to enhance the emotional, social and cognitive development of young children. Much of her work focused on children with developmental disabilities, children from low-income families and gifted children.

Klein’s work has been adopted by governments and agencies around the world and used as models of intervention with thousands – if not millions – of children. Incumbent of BIU’s Machado Chair for Research on Cognitive Modifiability and the Development of Intelligence, she also served as Director of the Edward I. and Fannie Baker Center for the Study of Development Disorders in Infants and Young Children at Bar-Ilan University.

The State of Israel recognized Klein a number of times for her singular contributions to her field. In awarding her the Israel Prize in 2011, the Prize Committee hailed her as one of the world’s most prominent researchers in the field of early childhood education research. In 2008 she was chosen by the government’s Ministerial Committee on Symbols and Ceremonies as one of 12 torch lighters at the opening ceremony for Israel’s 60th anniversary celebrations. She was the only academician to represent the State of Israel at this historic event.

“My dream is to see all the infants and toddlers in Israel receive the complete ‘mental diet’ they require, that they integrate into frameworks which are suited for them, and that they grow up to realize their full potential – for their own good and for the benefit of the society in which they live,” said Klein. It is because of Prof. Klein’s immeasurable contributions that so many of them have.
Select Academic Conferences and Events

A sampling of academic conferences and events that took place in the past year

May 2014
- Seminar: The Contribution of National Civilian Service from the Perspective of At-Risk Youth (Louis & Gabi Westfeld School of Social Work)
- Conference: Israel from the Perspective of Arabic Media (School of Communications)
- Seminar: Elderly and Holocaust Survivors Law Clinic (Faculty of Law)
- Teddy Bear Hospital (The School of Medicine in the Galilee)
- Conference in Academic Excellence: “Utopia and Reality” (Office of the Vice Rector)
- Symposium on the Jews of Babylonia: Identity and Legacy (The Aharon and Rachel Dahen Center for Culture, Society and Education in the Sephardic Heritage)
- Conference: Bridge Over Troubled Waters: Between Psychological Practice and Research (Department of Psychology)

June 2014
- Conference: Religious Women in Research (The Ludwig and Erica Jesselson Institute for Advanced Torah Studies - Midrasha for Women)
- International Conference: Foucault - The Masked Philosopher (Department of Philosophy)
- International Conference: A Literary Creation - Literary Approaches to the Book of Genesis (The Zalman Shamir Bible Department)
- International Meeting on Fiber Lasers and Applications (Department of English Literature and Linguistics)
- The 16th Israeli Bioinformatics Symposium (The Mina & Everard Goodman Faculty of Life Sciences)
- International Conference on Bridging Theory and Practice of the Gift (Department of Business Administration)

July-August 2014
- Guest Lecture on Proactive Aging (Louis & Gabi Westfeld School of Social Work)
- National Conference of the Da-Gan School (Churgn School of Education)
- Symposium for the Planning Directorate of the ISF (Begun-Sadat (BE SA) Center for Strategic Studies)
- Unique Learning Program for the Students of the Whittier School of Law (Faculty of Law)

September 2014
- The European Union: Where is it Headed? Annual Conference of the Israel Association for the Study of European Integration (Faculty of Law)
- Science Night 2014 (President, Deputy President, Vice President for Research)
- Operation Protective Edge: Military and Political Lessons (Begun-Sadat (BE SA) Center for Strategic Studies)
- Conference in LGistical Management for Managers (Department of Management)

October 2014
- Annual Conference of the Israeli Biophysical Society (The Mina & Everard Goodman Faculty of Life Sciences)
- 6th National Conference of Chemistry Research Students (Department of Chemistry)
- Strategic Debate between Israel - Cyprus (Department of Political Studies)
- Lecture by Brigadier-General Efraim Lapid: “Central Topics in the History of the Nation and the State” (The Brookdale Enrichment Program)

November 2014
- Academics for Children, Teenagers and Young Adults from Foster Care Systems (Louis & Gabi Westfeld School of Social Work)
- The International Media During Operation Protective Edge (School of Communication)
- Conference: SWNIE Single Wall Carbon Nanotube (Department of Chemistry)
- 1-CUBE Forum on the topic of “Single Molecule BioPhysics” (Department of Physics)
- Conference: Economic Bogcott - Coping with the Threat (Faculty of Law)
- Symposium on Semantic Text Processing - Industrial Outlook (Department of Computer Science)
- B. Harris Program Conference: Pros and Cons of Use of Technology at an Early Age (Baker Center for the Study of Development Disorders in Infants and Young Children, Churgn School of Education)

December 2014
- Annual International Academic Conference of The Raymond Ackerman Family Chair (Department of Business School of Business Administration)
- Workshop in Public Diplomacy (School of the Arts)
- INRPE Annual Meeting (Department of Chemistry)
- The 30th Annual Meeting of the Israeli Biophysical Society (Department of Life Sciences)
- Annual Scientific Conference of Research Presentations (Department of Sociology and Anthropology)
- 2nd Annual Bar-Ilan Conference “Face of the Book”: Past and Present of the Hybrid Library (Wurzweiler Central Library)

January 2015
- Why is the Whole World against Us?” Insights into Books Dealing with Sources of Hostility towards Israel (School of Communication)
- Gender, Religion and Groups from Another World (Churgn School of Education)
- Symposium “War and the Holocaust” for students from the “Reut” Ulpana in Petach Tikva (Department of General History)

February 2015
- Student Award: BUI Winter School: Advances in Practical Multi-party Computation (Department of English Literature and Linguistics)
- Israeli Youth Group Meeting 2015 (The Mina & Everard Goodman Faculty of Life Sciences)
- The 60th Year Commemoration of Operation Susannah (The Aharon and Rachel Dahen Center for Culture, Society and Education in the Sephardic Heritage)

Awards and Prizes

- Dr. On Aronson, of the Faculty of Law, was awarded the 2014 Uriel Savir Award for Young Researchers by the Israel Association of Public Law.
- Prof. Eitan Avtuv, of the Department of Music, was awarded the Yakir Yerushalmiah Prize for 2014.
- Prof. Haim Cohen, of the Mina & Everard Goodman Faculty of Life Sciences, was awarded The Leon and Maria Tabaenblatt Prize for Excellence in Medical Research for the academic year 2013-2014.
- Dr. Hadar Dancig-Rosenberg, of the Churgn School of Education, won the 2014 National Jewish Book Award for her work A Philosophy ofHAVNUTA: Understanding and Teaching the Art of Text Study.
- Prof. Alan Korngreen, of the Leslie and Susan Gonda (Goldsmith) Multidisciplinary Brain Research Center, won the prestigious NSF-IBSI (National Science Foundation - Binational US Israel Science Foundation) award, together with his collaborators, Prof. Nathan Urban and Prof. Rob Kass of Carnegie Mellon University.
- Prof. Betty Olivia, of the Department of Music, is the recipient of the Ministry of Culture and Sports’ Creativity in Zionism Award. The award was given for Prof. Olevira’s excellent dramatic creation, uniquely based on the Jewish heritage of the Balkan, Moroccan and Spanish Jewish communities.
- Prof. Doron A. Peled, of BUI’s Department of Computer Science, won the prestigious 2014 CAV (Computer-Aided Verification) Award, for the development of partial-order reduction algorithms for efficient state-space exploration of concurrent systems.
- Prof. Tamar Ross, of the BIU Department of Philosophy, was awarded the Yakir Yerushalmiah Prize for 2014.
- Prof. Arie Zaban, of the Department of Chemistry and Founding Director of the Bar-Ilan Institute for Nanotechnology and Advanced Materials (WINA), is the winner of the 2015 Prize for Outstanding Scientist of the Israel Chemical Society (ICS).