

IMPACT



SUMMER 2019



AMERICAN ASSOCIATES
Ben-Gurion University
of the Negev

From the desert for the world...



BEER-SHEVA'S INNOVATION ECOSYSTEM

UNRAVELING THE
MYSTERIES OF ALZHEIMER'S

CELEBRATING HEBREW
LITERATURE

SOLVING MEDICAL
CHALLENGES THROUGH
UNCONVENTIONAL TEAMS

KICK-STARTING KIDS
IN SCIENCE

Academics BGU-Style: SERVING TOMORROW... AND TODAY

BY **TONI YOUNG** AABGU PRESIDENT



For me, one of the most extraordinary things about BGU is its practical orientation. Of course it is an outstanding teaching and research university where knowledge in every discipline is built incrementally, as it must be. But running through so many of its programs is a more immediate mission: to be useful now. To improve quality of life for the people of today's world, as well as tomorrow's.

You'll find this quality embodied in the Faculty of Health Sciences hubs project featured in this issue. Nine collaborative initiatives have coalesced around principle needs determined by the faculty members themselves. All expressly aim to narrow the gap between research and clinic so that people everywhere can experience a better quality of life sooner.

Research on Alzheimer's disease focuses on the most basic scientific research: unraveling the mysteries of human memory and cognition. But here, too, a concern for the immediate accompanies the slow lab work. BGU researchers offer advice that connects with our daily lives.

In a topic that's very dear to me personally, discover how the Department of Hebrew Literature makes 2,500 years of literary history relevant to today's Israelis, both scholars and ordinary people. You'll also want to read about how the Jusidman Center brings Negev high school and middle school students to campus where they participate in challenging STEM programs that nurture high aspirations.

And perhaps most exciting of all is our cover story on the ongoing fulfillment of David Ben-Gurion's vision. "The future of Israel lies in the Negev," Ben-Gurion said. And the future of the Negev relies on BGU. Read about Israel's most important real estate project today: the development of an innovation ecosystem that partners academia with the IDF and high-tech industry, holding immense promise for Israel's future security and prosperity.

IN THIS ISSUE

News Briefs

Beer-Sheva's Innovation Ecosystem	3
A Vision for 21st Century Zionism, by AABGU CEO Doug Seserman	4
Empowering Your Philanthropy	6

Donor Profiles

Stanley Ginsburg: Drawing Young People to Israel	7
Connie and Sam Katz: Sharing Commitments and Connections	8

Education and Research

Unraveling the Mysteries of Alzheimer's	9
Celebrating Hebrew Literature: Past and Present	13
Solving Medical Challenges Through Unconventional Teams	20

Helping the Local Community

Kick-Starting Kids in Science	23
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Alumnus Profile

Idan Zu-Aretz, COO of SodaStream	25
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Regional News	26
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Cover: An architectural rendering of BGU's future North Campus. A \$250 million campaign is underway.

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BEER-SHEVA'S INNOVATION ECOSYSTEM

BGU's Marcus Family Campus and New North Campus + HQ for the IDF's High-Tech Elite + BGU's Advanced Technologies Park + Soroka Hospital = **Silicon Wadi**

THE LONG-ANTICIPATED move of key Israel Defense Forces (IDF) units to Beer-Sheva has begun. A new \$6.44 billion campus adjacent to BGU has started to take shape as the headquarters for the military's technology and intelligence corps, the air force, and the Southern Military Command, which is responsible for dealing with threats from the Gaza Strip.

This megaproject is envisioned as a four-way win for BGU, the IDF, southern Israel, and the country as a whole. "For the University and the entire staff, it's a huge opportunity," says Prof. Dan Blumberg, vice president for industrial and regional development, and director of BGU's Homeland Security Institute. "We'll conduct joint research. We'll gain first-rate IDF teachers and students and attract more top engineering and computer students

"I believe that 10 years from now the connection between 30,000 top IDF people and the University won't be separable."

— PROF. BRIG. GEN. (RET.)
JACOB BORTMAN

to BGU. It will change the demography of the campus in many ways and reinforce the University's position as a national leader."

For its part, the IDF will leave behind a set of aging, outdated buildings further north to inhabit state-of-the-art facilities in Beer-Sheva that have been

adapted to digital technology. Leveraging BGU's proximity to develop its talent is intrinsic to the plan.

"These IDF people are at a very high technical level," says Prof. Jacob Bortman of the Department of Mechanical Engineering, who led BGU's initiative to coordinate the IDF move and collaboration with the University. "Such people need to be challenged and connected with a university." He expects that up to 70 percent of the 1,000 students who undertake academic studies at universities across Israel while serving in the IDF intelligence and computer corps, as well as family members, will apply for degree programs at BGU.

And for the region: "The triangle created by BGU, the IDF and industry research at the Advanced Technologies Park will create an unbelievable ecosystem and bring the South and the Negev to a new place," Bortman believes.

Continued on page 17

Top: A rendering of a part of BGU's North Campus



A VISION FOR 21ST CENTURY ZIONISM

Moment magazine published this interview with Doug Seserman, CEO of AABGU, in a recent issue.

How is David Ben-Gurion's vision still relevant today?

I think of Ben-Gurion as the Yoda of the Jews, small in size but wise and powerful. He really had ideas way ahead of his time, and his voice is missing from the current dialogue. I'm on a mission to pursue his vision because I think that's what is needed today.

Why should American Jews care about the Negev?

If you want to experience Israel's past, that's Jerusalem. If you want to understand Israel's present, you visit Tel Aviv. But if you want to imagine Israel's future and invest in it, then you need to immerse yourself in the Negev. Ben-Gurion understood from the very beginning that the human act of creation as it relates to Israel would

"I think of Ben-Gurion as the Yoda of the Jews, small in size but wise and powerful."

— DOUG SESERMAN

best be manifested in the Negev. There was nothing there so there is nothing to argue about. Even today, the Negev comprises 60 percent of the country's land, yet has less than 10 percent of its population.

Whatever the solution is for the future of Israel, the Negev is key to it. Ben-Gurion knew the Negev needed

a first-class university that could serve as the scientific research vehicle and the economic engine that could drive growth. I think Ben-Gurion University represents the best of Israel in the least contested place.

How is BGU helping to fulfill Ben-Gurion's vision?

We're the Negev's largest employer. We have 6,500 people working at the University. Our science contributions make the desert bloom. We solved Israel's water problems, and we export intellectual water know-how to the United States and worldwide. Thanks to BGU's work, Israel is the only country in the world with a desert that's shrinking.

Top: BGU's Marcus Family Campus

What is your vision for BGU?

My vision is for BGU to be a beacon of light unto the Jewish people, something that we can all rally around in a really positive way.

That rallying has two pieces to it. There is the physical part, which is the university itself and its amazing work educating Israel's youth, doing world-leading research in science, medicine, agriculture, energy, cyber, robotics, and artificial intelligence. The second component is conceptual. We need to reclaim Ben-Gurion's vision for the 21st century.

In what ways can BGU strengthen Israel's relationship with Jews in the United States and the Diaspora?

I think Ben-Gurion's vision can be a clarion call, especially for young people. There's way too much focus today on what's wrong in Israel. People on the left telling the right they're wrong, people on the right telling the left they're wrong. Neither side appreciates the other's narrative. We seem to have lost our ability to have civil discourse. We're never going to solve anything by arguing.

The old thinking is that Israel needs to exist because Jews need an insurance

policy against the Holocaust. While there is truth in that, and the Pittsburgh massacre is an obvious result of growing anti-Semitism, we need new thinking. The new thinking is simply that the world is a better place with Israel in it. If we focus on the positive contributions that Israel makes, those positive contributions will transcend over time the negative realities of the seemingly unanswerable conflict with the Palestinians.

What is happening in the Negev today?

You see a very diverse society—with Jews from all over the world and the Bedouin Arabs who live and work there and attend BGU. Beer-Sheva itself has become the cyber capital of Israel and to some degree the cyber capital of the world. That's because of the research BGU does, its relationship with the Israel Defense Forces and commercial partnerships, like the one BGU has with the German telecommunications giant, Deutsche Telekom [T-Mobile]. It's becoming more and more

popular for multinational companies to acquire Israeli companies for R&D.

BGU is part of a larger innovation ecosystem that includes Soroka University Medical Center, the Advanced Technologies Park, and adjacent to it, the IDF tech campus, which is the current and future home of the communications and elite units. Soon, there will be 5,000 soldiers interacting with BGU students. I call this the most important real estate project for the future of Israel.

What do you tell young people?

We can still make Israel what we want it to be. The highest standards possible should be applied to the Jewish state. Israel is also still a young country, a work in progress. I say get involved, get your hands dirty, get involved in the desert, the Negev. Connect with your past and see your future. ■



“It is in the Negev that the creativity and pioneering vigor of Israel shall be tested.”

— DAVID BEN-GURION

USING THE NEW TAX LAWS TO EMPOWER YOUR PHILANTHROPY IN 2019

By Neal Myerberg, Esq., AABGU Planned Giving Advisor

INDIVIDUAL INCOME TAX returns filed by April 15 were the first to consider the tax law changes that went into effect beginning in 2018. For many individuals and couples, it may have been your initial experience with reduced marginal rates and reduced itemized deductions.

For those living in high tax states where real estate and state income taxes previously represented a substantial portion of your itemized deductions, these state and local tax (SALT) deductions were limited for 2018 to \$10,000. Even though the standard deduction doubled for individuals and couples, it was unlikely to compensate for SALT deductions no longer available.

Nevertheless, charitable contributions were not limited; and, in fact, gifts of cash to charities in 2018 were deductible to the extent of 60% of adjusted gross income (AGI), an increase over the prior limitation of 50% that had been the rule for a long time.

For some taxpayers, moving into the lower tax brackets may be directly related to a substantial amount of itemized deductions. Therefore, it may be desirable for those individuals and couples who are traditionally philanthropic to increase your charitable giving and thus your charitable deductions this year.

Increasing the charitable deduction for various types of charitable giving may have substantial tax, economic and philanthropic benefits in 2019 and beyond. Here are some ways to accomplish this that may not only provide tax benefits but also increased lifetime income:

- **Make charitable gifts to AABGU with appreciated long-term capital gain property:** Avoid tax on the gain and take advantage of deducting full value in positive markets.
- **Take advantage of the IRA-Charity Rollover:** Pay no tax on your required minimum distribution for 2019 if some or all is donated directly to AABGU.
- **Make larger charitable gifts to exceed the standard deduction:** Increase needed itemized deductions for 2019 and move into lower rates.
- **Establish AABGU charitable gift annuities:** Get high fixed-rate lifetime income, much of which may be paid tax free, and obtain an itemized charitable deduction. AABGU rates are among the highest in the country.
- **Make AABGU the beneficiary of an IRA or other qualified plan:** When considering your future estate gift to AABGU, consider the added benefits of making it through your IRA or other qualified plan.
- **Use charitable remainder trusts:** Protect against taxes on long-term capital gains; get fixed-rate lifetime payments and a charitable deduction.



Fact:

Students from 16 countries are earning graduate degrees in Israel studies at BGU's Ben-Gurion Research Institute.

And you can help.

By establishing an AABGU Charitable Gift Annuity (CGA), you are making it possible to provide fellowships to international students who become ambassadors for Israel.

Help support this and other one-of-a-kind academic programs at Ben-Gurion University of the Negev, while receiving high fixed-rate income for life with great tax benefits.

Sample Annuity Rates

Age	65	70	75	80	85	90
Rate	6%	6.5%	7.1%	8%	9.5%	11.3%
Tax Free*	64.6%	68.3%	71.5%	74.6%	79%	81.8%

* In the month you use cash to establish a gift annuity, a final calculation is made determining the portion that will be paid to you tax-free.

For more information or to speak to Neal Myerberg contact your local AABGU regional office or call 800-962-2248 ext. 1401.



STANLEY GINSBURG
BALA CYNWYD, PENNSYLVANIA

DRAWING YOUNG PEOPLE TO ISRAEL—AND BGU

“WE NEED PEOPLE to know Israel and talk for Israel,” says Stanley Ginsburg. “And the time for them to come is the period in their lives when they can understand what they see and develop a future commitment to Israel.”

In the mid 1980s, Stanley, then president of a real estate investment business, established a family foundation. He decided to help an Israeli university draw in American college students for a firsthand experience. With his wife, Arlene, and children, he toured Israel. Together the family interviewed five universities. Then they voted. The decision was unanimous: Contribute to “the youngest and most enthusiastic—Ben-Gurion University of the Negev.”

This agreement was based in great part on the future vision voiced by the University’s president at the time, when BGU was serving only four or five thousand students. “It all came true,” Stanley says of that vision. BGU’s student body now numbers 20,000 and is growing rapidly.

“It was a wonderful choice, not only terrific for Israel but for helping develop the Negev, which just as David Ben-Gurion envisioned would be the future of Israel.”

Stanley brought in his friend Ira Ingerman and his family, who were already funding scholarships for BGU students. An international study abroad program evolved and, in 2006, it formally became the Ginsburg-Ingerman Overseas Student Program (OSP). For 20-plus years it has given students from colleges across the United States and Canada an inside experience of Israel.

In addition to his support of OSP, Stanley has long sustained a scholarship fund for BGU students. He has also given his time and energy to support the University and assumed leadership positions. He has chaired AABGU’s Mid-Atlantic Region and served on the AABGU national board and its executive committee. He and Arlene are longtime members of the prestigious Ben-Gurion Society. In 2008, Stanley was presented with a BGU honorary doctorate.

Over the years, OSP has adapted to the student population of the time to connect with changing interests. Currently it is being reimagined to attract today’s college generation. In development are customized summer internships, opportunities to work in the labs at BGU or the Advanced Technologies Park, and other resume-building components. BGU’s special strengths will be highlighted more intensively with offerings in “hot” fields

such as cyber security, artificial intelligence, robotics, global health, water research, and sustainable development.

Stanley is highly enthusiastic about the plans. “It’s been a very satisfying collaboration and we will continue it.”

And now he wants to send more IDF soldiers to BGU to get degrees in those “hot fields.”

While a number of other organizations have benefited from his leadership and philanthropy, a program that is especially close to Stanley’s heart is a scholarship program that enables soldiers leaving the Israel Defense Forces to earn a degree at BGU.

“Many come out of the army broke,” he says. “This brings them to the Negev after their army service—that’s my goal. I want to see a steady flow of these young people come to BGU for their education.” Through Friends of the IDF, he funds 15 incoming ex-soldiers each year and continues to support them until they earn their diplomas.

“I send them to BGU to get degrees in subjects that will advance Israel. Fields like computer science, robotics and medicine,” he says.

Stanley is enthusiastic about the impending IDF movement of elite soldiers to the Negev (see page 3). It is entirely in line with his belief in the region’s potential and the vitality of the University, whose growth he has supported for decades.

He is proud that BGU is home to the largest number of IDF reservists and wants to see as many soldiers as possible attend BGU because “I see a great future for BGU. I think the University is one of the best things that ever happened to Israel.” ■

FOR CONNIE AND SAM KATZ it's a Philadelphia story.

Their active professional, civic and philanthropic lives focus on Sam's native city, and it was a Philadelphia connection that drew them into the AABGU orbit.

In 2000, as notable citizens and supporters of Jewish and cultural causes, the Katzes were asked by a close friend to be honorees at AABGU's Mid-Atlantic Region gala. "We had no connection to AABGU at the time but couldn't say no to our friend," Connie recalls. "We were blown away by what a wonderful group of people were here in Philadelphia and so committed to the University. It was easy to keep coming back."

The Katzes not only came back but have served as AABGU leaders. Today, they are the co-chairs of the Mid-Atlantic Region and Connie serves on AABGU's national board of directors.

Connie appreciates the pioneering spirit she senses in BGU. "The University is young compared to the others, and not just different, but unique." For Sam, BGU proved to counter the sentiment that everything outside of Jerusalem and Tel Aviv is in Israel's "periphery."

"So, it has been a good way for the two of us to engage with Israel through an institution already established, but open to people who want to play a role and make a difference," he says.

For 20 years Sam was co-founder and chief executive officer of Public Financial Management, working with governments throughout the U.S. on financial distress and capital funding. He later chaired the state authority responsible for overseeing Philadelphia's finances and was a three-time candidate for mayor. One of his races was the closest in the city's history and prompted deep examination of the city's politics. Sam has also been a candidate for governor. He does not plan to run again.

"I lost four elections, that's enough," he says cheerfully. But, Connie notes, "I field a lot of calls begging him to run—they say, 'We need you!'"

Ten years ago Sam moved on to celebrate his beloved city as a documentary filmmaker, founding History Making Productions. Projects have included a 14-part



CONNIE AND SAM KATZ
PHILADELPHIA, PENNSYLVANIA

SHARING COMMITMENTS AND CONNECTIONS

Emmy-winning series on the city's history as a research and development lab, and films for various nonprofits.

Three years ago, feeling the company had achieved "a level of excellence," he expanded its scope to cover even more ambitious projects including a documentary on the bankruptcy and recovery of Detroit; one on the transformation of Pittsburgh and the nature of work in America; and another on Beethoven in Beijing — "how the center of gravity of classical music has shifted to China, and what we can learn from that to keep classical music flourishing in the U.S."

Connie is responsible for broadening the couple's horizons even further. She had grown up in North Carolina but, after meeting Sam when both were in college, gladly began married life in his beloved city.

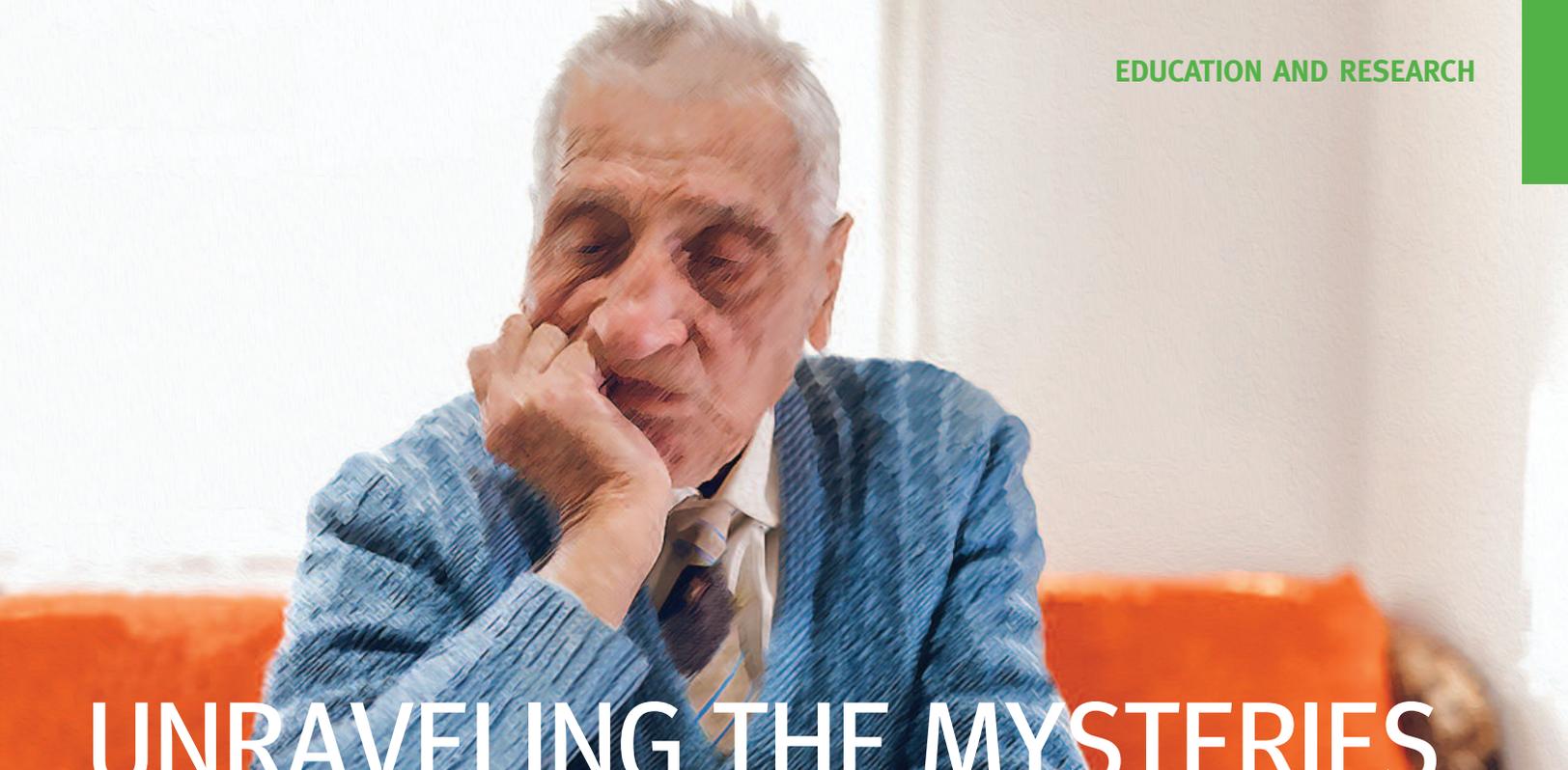
"We were young and energetic and got into the throes of politics together, which was a lot of fun for a long while—until we decided one of us needed to get off the bandwagon and have children. We had four, and I brought our lives into the realm of volunteerism. That's been a full-time job for me." Engagement with local synagogues and the children's schools led to board and trustee roles.

The warm AABGU spirit that charmed Connie and Sam two decades ago still sustains them. "It has brought us through many kinds of different involvement," Connie says, "all very exciting." She especially relishes the visits from BGU faculty. "We have learned a lot," she says. "The chapter is our strong link to so much that is happening."

Sam believes "AABGU helps reinforce the best of Israel. If there's one thing Israel does better than anywhere in the world, it's how to solve problems. BGU is a major problem solver. Desert agriculture, cyber security, telecommunications, bioinformatics—they're doing unbelievable things. And the regional chapters wave the flag for these accomplishments."

Connie relates how thrilled she recently felt when a visiting professor shared how academics, scientists and influential leaders from so many countries come to BGU with questions. "They ask, 'How did you do this? Can you show us how we can do it?'"

"Once you touch BGU, you're touched." ■



UNRAVELING THE MYSTERIES OF ALZHEIMER'S

CONSIDERING the impact of Alzheimer's disease on patients and their families, as well as the ballooning economic cost, you might expect researchers to focus heavily on this dominant neurodegenerative disease. In fact, "solving" Alzheimer's has long been both a government target and a focus for the medical and scientific community.

But 115 years after its discovery and billions of dollars spent, it seems that scant progress has been made toward identifying, treating and preventing the mental deterioration that is Alzheimer's disease, or AD for short.

The pathology of AD has been understood since Dr. Alois Alzheimer autopsied the brain of a deceased patient and connected her erratic behavior to a diminished brain size and accumulation of a substance, known as amyloid plaque, between the nerve cells. Even with today's research tools, many paths toward understanding AD have virtually dead-ended.

"The problem is that we simply do not sufficiently understand basic elements of brain functions associated with memory and mind—healthy

The statistics are painful. In the United States:

- 10% of people 65 and over suffer from Alzheimer's
 - 30% over 85 are afflicted with AD
 - 1 in 3 seniors dies with AD or another dementia
 - Alzheimer's is the sixth leading cause of death
-

or diseased," explains Prof. Alon Monsonogo, a member of the Shraga Segal Department of Microbiology and Immunology at BGU's Faculty of Health Sciences and of the National Institute for Biotechnology of the Negev.

"Anything that touches the basic elements of brain function—memory, cognition, awareness—challenges the researcher. What is memory? We don't really know. In addition, when I can't find my keys, or remember what I did yesterday, or suddenly don't know the year, is this a disease or a normal process of aging?"

"We may expect to find a similar process happening in every individual who lives long enough. It's like brain development in a child, but in reverse."

Only five percent of AD cases develop at age 40 or younger. Studying such early onset cases has helped investigators identify genetic information and the mutations that are key to the development of early-onset AD. "This is a huge achievement," Prof. Monsonogo says. "We know that mutations in certain genes are directly connected to the disease process."

However, "sporadic" AD that is age-related differs significantly from early onset AD, which is familial, and needs to be more extensively studied. Many researchers believe that focusing on the early onset version of the disease has led to the failure of many clinical trials.

Over the past 20 years, research on the molecular level has also produced far more understanding of how misfolded proteins accumulate in the brain and form multi-unit structures and plaques.

"We know a lot more about the molecular machinery now," Monsonogo says. "But reversing the process is still impossible. Is this machinery a result

of this disease, or a cause? It's still not clear how these misfolded proteins cause synaptic loss, neuron loss, and, in the end, memory loss. We don't know the exact connection between the mutation, the pathologies and the loss of basic cognitive function."

Broadening the quest may reveal the key: How does AD relate to other ailments of the body? What role does inflammation in the brain play, and would countering it be beneficial? What is the impact of environment and lifestyle—diet, activity level, chronic stress?

Researchers at BGU are working on these core questions. Here are three avenues that hold exciting promise for the near to middle future.

**ALON MONSONEGO:
THE IMMUNE SYSTEM
AND DEMENTIA**

Prof. Alon Monsonego, the Zehava and Chezy Vered Career Development Chair for the Study of Alzheimer's and Neurodegenerative Diseases, draws on his own specialized background in both neurobiology and immunology

to take a unique direction. "All research projects done in my neuroimmunology lab must have both a brain component and an immune system component," he says.

"My hypothesis is that similar to the brain, the immune system undergoes a massive change as we age and I believe these deteriorations go hand in hand. Our bottom line is to better understand the contribution of the immune system to the progression of dementia and AD."

The brain needs constant repair because it's an extreme metabolic energy-consuming organ, Monsonego explains. It has traditionally been assumed that the brain depends on its own glial cells for repair because the blood brain barrier (BBB) blocks leukocytes (immune cells) from penetrating it.

"But now we know that the brain cells do not work alone in repairing the brain tissue—it is always in dialogue with the immune system. We don't understand the entire language yet, but we do know

that the cross-talk is extensive and essential to proper brain functioning."

The genetic background to AD exists before aging, he notes, but doesn't cause the disease until individuals become older.

Then the repair system begins to break down. "If the repair system in the body isn't working properly, this can primarily be a result of the dysfunctioning immune system.

"If we understand what goes wrong in the immune system with aging and how it relates to changes in the brain, then we can ask: What can we do to reverse the process?" Monsonego has



Prof. Alon Monsonego

pioneered this research and his latest discoveries will shortly be published.

He believes that the answer to slowing down and possibly preventing AD will be based on immunotherapy via vaccination. From early 2000, vaccines that used the immune system to clean the brain from misfolded

proteins, similar to the way vaccines kill pathogens, were generated by a group from Harvard. But they failed clinical trials because of unacceptable side effects and ineffectiveness.

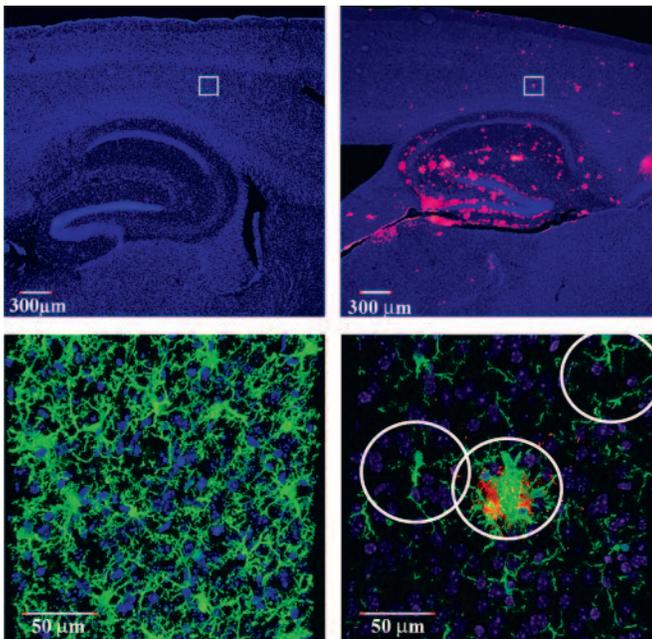
"But today, we know a lot more about immunology and what we did wrong," Monsonego says. He has high hopes for generating an immune response that will protect us from the disease, temporarily or permanently.

"While so far the strategy has been a disappointment, it's a great hope that this approach will change the history of the disease." For this to happen, another hurdle must be cleared: a way to diagnose AD early enough to make a difference.

"Our immune systems are individual. We need to find early biomarkers—which may well be immune biomarkers—to tell us who is more susceptible and then to adjust the immunotherapy to the individual's need."

Meanwhile, Monsonego believes we are not altogether without tools to fight mental degeneration. "I have a huge interest in how chronic stress—whether psychological, nutritional or environmental—damages the immune system. Stress increases susceptibility and facilitates the disease process in autoimmune and psychiatric ailments. It increases brain inflammation, which connects to AD."

As a byproduct of this line of research, his lab developed a kit to detect the amount of damage effected in an individual by chronic stress. The kit awaits commercialization, but together with a research team at Soroka University Medical Center, Monsonego is now engaged in studies of whether mindfulness therapy can



Top left image shows healthy, undamaged brain tissue of a mouse. Below it, a close-up image of the portion marked with a white square showing the microglia (in green) responsible, among other functions, for brain cell repair. Top right image shows accumulation of beta amyloid plaque (in red) following insertion of a human mutated gene associated with early Alzheimer's. Below it, microglia activated by the plaque's presence. Images taken in Prof. Monsonego's lab.

relieve stress and impact the clinical process of Crohn’s disease, which is an inflammation of the gut.

“This may be a great opportunity to explore the immunological basis of stress-induced inflammation and whether it is directly linked to the disease process,” he says.

Monsonogo believes that it all connects. In an uncertain number of years, he anticipates that these various research approaches will have a big impact on AD, ALS, other brain diseases, and human health in general.

“But it’s important to remember that these diseases are very complex, and since there is no treatment yet, keeping a healthy lifestyle is a huge benefit to AD and to healthy aging in general.”

**RACHEL LEVY:
INFLAMMATION AND
ALZHEIMER’S**

Biochemist Prof. Rachel Levy, who has been working on inflammation issues for two decades, recently turned her focus to neurodegenerative diseases, and specifically Alzheimer’s.

“Inflammation is very important to defending our bodies, and many episodes of it occur in our bodies every day,” she emphasizes. “But inflammation can participate in the pathogenesis of a variety of diseases, which is why it has been called a ‘secret killer.’”

When the body is damaged, it defends itself with a high blood flow that produces inflammation, and recruits phagocytes, cells that fight infection by ingesting the invaders. But, Prof. Levy explains, phagocytes cannot discriminate between an inflammation caused by infection and others that are not. When infection is not involved, the chemicals produced by interactions within the cell are released outside of it and damage tissue.

Early in her research path, working with phagocytes that kill bacteria, Levy discovered that a specific protein molecule called cytosolic phospholipases A2 (cPLA2) is present in every cell.



Prof. Rachel Levy

One of its functions is to regulate the activity of NADPH oxidase—the enzyme that releases an oxygen radical, or superoxide. This is the major mechanism that enables the phagocytes to defend the host and kill invading pathogens.

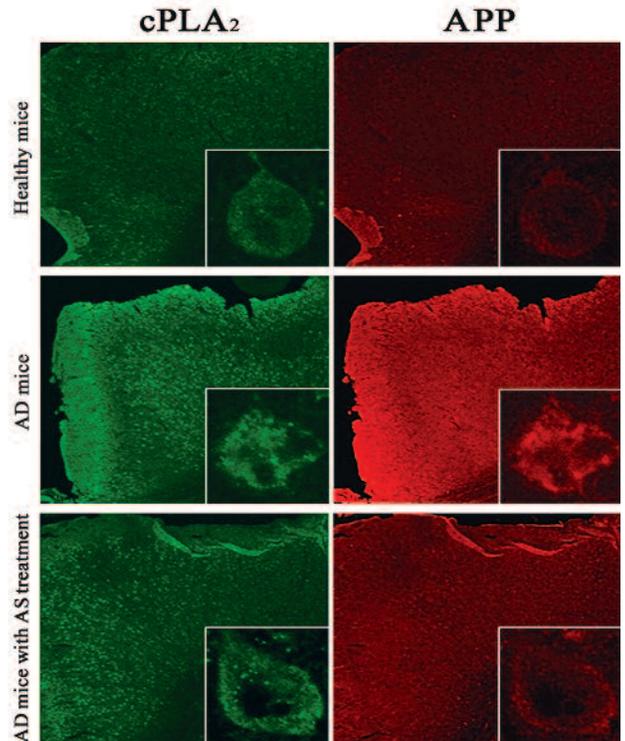
“But in inflammatory diseases not related to infections, NADPH oxidase releases high levels of superoxides that cause damage to the inflamed organ. Our studies showed that cPLA2 could be a good way to combat inflammation since it regulates NADPH oxidase activity as well as other inflammatory functions.”

This approach led Levy’s lab to develop a drug against cPLA2 called oligoantisense (AS-drug). It gave her promising results in treating various diseases in mouse models, including peritonitis, rheumatoid arthritis and colitis. The drug is also relevant to obesity, which is associated with a systemic low-grade inflammatory state. And inflammation plays a key

role in the development of diabetes and atherosclerosis. Experimenting with mice given a high-fat diet, the lab found that after only three days they developed an insulin resistance that could be prevented by an injection of the AS-drug.

Inflammation is a large component of brain diseases, Levy says, and she recently moved her

focus to neurodegenerative diseases, including Alzheimer’s. Microglia are the phagocytes of the brain and work to break down and eliminate amyloid beta, protein fragments released by the brain cells. However, in the brain of patients with Alzheimer’s disease, the levels of



Cortex sections of a mouse brain demonstrating the impact of Prof. Levy’s AS-drug. Green-stained images on left compare brain tissue of a healthy mouse to one with AD, and another treated with AS. The drug prevented elevation of the protein cPLA2 that regulates the process by which phagocytes protect the body from pathogens. Red-stained images on right show that the AS reduced production of amyloid precursor protein that binds to beta amyloid and causes dementia in AD patients.

amyloid beta protein that accumulate are too high to be cleaned by microglia. This produces inflammation that causes damage to the brain.

“Our mice with a form of AD got much better after we injected the AS-drug into their brain,” Levy says. “But we can’t deliver the drug into the human brain to defend it from amyloid plaque because we don’t yet know how to pass the blood brain barrier.

“That’s one of the big challenges and we spend a lot of time trying to solve it. We believe we have the drug to fight Alzheimer’s—but we need a way to deliver it.”

Levy’s lab is currently working on amyotrophic lateral sclerosis (ALS), for which spinal injection is possible. When that set of experiments is completed later this year, she hopes to move on to clinical trials and then refocus on Alzheimer’s.

**DR. DEBORAH TOIBER:
DIET AND DNA DAMAGE**

Dr. Deborah Toiber believes that aging is the main risk cause of neurodegeneration, and lifestyle could influence how we age. The main hypothesis of why we age is that DNA damage accumulates and our ability to cope with unrepaired damage decreases. She is exploring how lifestyle—particularly diet—affects the body’s ability to repair damaged DNA and modifies our epigenetic code (how our genes respond to the environment). People with metabolic disorders such as diabetes and obesity have a higher chance of developing Alzheimer’s and other neurodegenerative diseases, she observes.



Left: Research underway in Dr. Deborah Toiber’s lab. **Right:** Image shows mutations of tau (green), one of the main proteins of brain cells affected in many neurodegenerative diseases, including Alzheimer’s. The cells are similar to the brain’s neurons but are grown in dishes to facilitate research.

Dr. Toiber has identified a specific protein, sirtuin-6 (SIRT6), which protects healthy organisms from many neurodegenerative diseases. In mouse models, she discovered that an unhealthy high-fat diet reduces the amount of SIRT6—and in Alzheimer’s patients it is almost completely gone.

“Losing this protein that helps to prevent brain damage makes people more susceptible to neurodegeneration,” Toiber says. “We see this as a domino cascade that starts with losing the ability to repair DNA due to the loss of proteins that could protect it. We can’t control DNA damage caused simply by living, but how susceptible our brains are to the domino effect can depend on lifestyle. To prevent damage to the brain once the

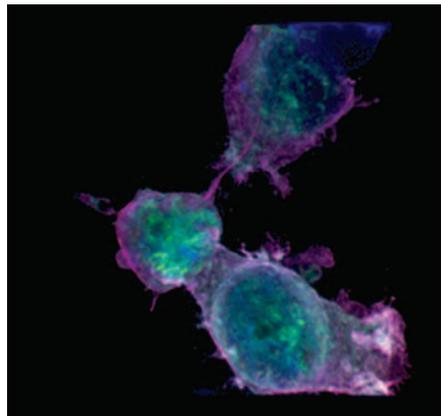
cascade starts, we need to increase the capacity of DNA repair and find places in the process to intervene before the brain is damaged.”

Toiber’s lab is exploring several points in the cascade with promising results. Several significant publications this year will signal her progress.

Like Levy and many other investigators, Toiber finds the blood brain barrier a major obstacle to direct intervention. “We need to find a way to deliver SIRT6 only to the brain,” she says, “or find a balance to benefiting the brain without harming other tissue—nothing in biology is isolated.”



Dr. Deborah Toiber



Toiber hopes to advance progress toward developing chemical compounds that will “at least slow the cascade.”

Her research thus far has relied on mice but is expanding to a transparent worm popular for research, *C. elegans*, and *drosilla* (fruit flies). How can you tell that a fruit fly has AD? There are a few behavioral indicators, Toiber says, like motor problems and losing aversion to a particular smell. The brain becomes smaller, as in human beings, and the neurodegeneration may be visible in the eyes. To explore this phenomenon in depth, her lab plans to collaborate with a retinal expert to find biomarkers for neurodegeneration in the human eye.

Her findings suggest a strong correlation between nutrition and neurodegen-

eration. If 60 percent of a diet is composed of saturated fats, sugar and carbohydrates, and/or is heavy on processed foods, our bodies age faster, Toiber says. And learning ability is impaired.

“We want to understand the molecular cause, the link between an unhealthy diet and the brain, to find

chemical compounds that will counter toxicity and improve health.”

To further their out-of-the-box thinking, Toiber and several colleagues organized a groundbreaking conference in January that brought to BGU a wide range of world specialists in aging and epigenetics. More than 140 participants attended the meeting to learn from a range of international experts and to share results of their investigations: why we age, what causes brain disease, and how to use the research to understand and develop novel therapies.

“We can’t work in isolation—we must see what others are doing,” Toiber says. “Then it’s ‘Ahhh! We saw this but didn’t understand!’ Everybody has a different piece of the puzzle. When you come together and create new knowledge and collaborations, you see the bigger picture.”

Toiber believes that with labs all over the world beginning to figure out important clues and therapies, treatments for AD may reach clinical trials in five to 10 years or even sooner. “Things are moving much faster and there’s even hope for this generation to delay or at least ameliorate Alzheimer’s.”

But, she cautions, we need to remember that this work is not about living longer: “We are already doing that but now we need to live as healthily as possible. We’re working to increase the health span—not the lifespan.” ■

To support Alzheimer’s research at BGU go to www.aabgu.org/donate-brain-science



Celebrating Hebrew Literature PAST AND PRESENT

“When I was little, my ambition was to grow up to be a book. Not a writer. People can be killed like ants. Writers are not hard to kill either. But not books: However systematically you try to destroy them, there is always a chance that a copy will survive and continue to enjoy a shelf-life in some corner of an out-of-the-way library somewhere in Reykjavik, Valladolid or Vancouver.”

– AMOS OZ, *A Tale of Love and Darkness*

TOGETHER, the Department of Hebrew Literature and Heksherim: The Research Institute for Jewish and Israeli Literature and Culture create a unique community dedicated to keeping 2,500 years of Hebrew literature safe and vibrant.

“BGU is the only place on earth where you can read and learn literature all the way from the Bible till two days ago,” proclaims Prof. Yigal Schwartz, one of the founders of both the department and research institute.

The two entities work collaboratively. The Department of Hebrew Literature engages in teaching and research to prepare the next generation of Hebrew literary scholars, critics and writers. With 17 faculty members, it has grown to become the biggest such department in the world.

For its part, Heksherim has built the most extensive archive anywhere of Israeli authors writing in Hebrew

since the country became a state. It publishes books and periodicals and mounts a burgeoning set of activities to connect today’s Israelis with their cultural heritage and introduce the larger community to it as well.

FROM THE BIBLE TO THE TALMUD TO TODAY

“We try here to cover the whole field,” says department head Prof. Haim Weiss. For him and his colleagues, the mission goes far beyond the academic. “Our sense is that we have to hold the last frontier, protect the heritage and connect the literature with Israel as a place. Israel is the center of Hebrew literature and we want to keep it that way. So we teach in Hebrew, publish in Hebrew and research in Hebrew.”

Fifty-eight Ph.D. students currently study in the program, and 50 students begin bachelor’s degrees each year.

Two master’s degree tracks are offered: research/academic, and for a group of talented aspirants, creative writing.

Courses cover the gamut from the Bible through rabbinic literature, from the Middle Ages to literature of the last 200 years. Students develop a sophisticated toolbox for analysis, interpretation and criticism from a variety of literary perspectives.

Historical knowledge relates to today’s literature as well as yesterday’s, Weiss points out. “In order to understand what today’s authors write, you must understand the connection with what was written a thousand years ago. We try to figure out those connections, which even authors are not always conscious of.”

At the same time, the literature opens up worldviews that are very different from our own. Weiss himself focuses on the Rabbinic Era, from the first to sixth centuries. He had grown up in a religious family, he explains, but disliked how he was taught at school. “It was boring! They took out all the stories and studied only the legal part.”

He discovered in this early literature—which consists of commentary on

Top: A recent Writer’s House event for the community featured prominent Israeli author Eshkol Nevo (far left) and actors reading from his latest novel, *The Last Interview*.



The Heksherim archive includes both current and historical materials.

the Talmud written by rabbis—a rich treasury of stories and anecdotes. While on the overt level the comments are meant to interpret the text and provide moral guidance, they go far afield to give advice on the practicalities of living and often take surprising directions.

“It was a different world then and they looked at life bravely,” says Weiss, “talking about cultural and even psychological questions that we don’t talk about today. There were no taboos—they wrote about everything there is, which is not something you expect to find in religious literature.

“They saw the world much more openly—they believed the dead are very active, for example, and took angels, ghosts and evil spirits for granted. This created weird and funny stories with behavioral guidelines that seem odd today—messages like ‘we shouldn’t pray in a cemetery,’ for example, ‘because dead people are not allowed to pray and will be jealous.’”

MAJORING IN WHAT YOU LOVE

While the department is holding its own and has even grown, attracting good students becomes more and more challenging, Weiss acknowledges. “With the pressure from families, and starting college at age 22, many young Israelis feel they need a more concrete education.”

Weiss counters this by encouraging students to adopt two majors: “I tell them the first will be about what they will do when they grow up. Then I say, take us as your second major—you have enough time to work your whole life, so study what you like and be a lawyer later. Those who come usually fall in love with the department.”

Yiftach Ashkenazi, who is working on his Ph.D. in Hebrew literature, is one such student. “Literature is a big part of my life,” he says. He had researched

a relevant subject for his master’s degree and came to BGU’s department because “it’s the best in Israel.

“It’s a very surprising place, a huge community and so active—there are seminars, authors, people writing, lunches, study groups—and you know everyone.”

“BGU is the only place on earth where you can read and learn literature all the way from the Bible till two days ago.”

— PROF. YIGAL SCHWARTZ

Ashkenazi’s thesis-in-progress analyzes the market for books in Israel—“the relationship between politics, technology and policy on publishing.” As people read less, a world crisis in publishing has evolved, he points out, and the problem is especially acute in Israel. “The whole market is shrinking. Many people are publishing but in all Israel you have around 200,000 people buying a book maybe once a year.”

When his Ph.D. is accomplished, finding a postdoctoral opportunity will be difficult, Ashkenazi acknowledges. But despite the poor market for

humanities majors everywhere, he sees some graduates finding places in the academic or other spheres. “Many are optimistic.”

Weiss confirms that there are in fact jobs in schools, publishing houses and journalism, and believes that more and more organizations value humanities majors, who are able to think outside the box.

Opening doors is the way to survive, Weiss says, and the department actively reaches out to new populations with workshops and conferences in Israel and abroad. Fostering collaborative and interdisciplinary studies is high priority. A student exchange program with New York State’s Bard College is being developed.

Weiss hopes to make Hebrew literature an intellectual meeting point for other disciplines and organizes events to accomplish this. “Students come from social sciences, natural sciences, political science, history, and literature. Then we sit and ask questions and try to solve them together. It’s great brainstorming.”

Weiss is excited about an unusual lab taking shape this year that will bring new methodologies to research. The innovative Digital Humanities Lab will handle big data, enabling the department to pose a whole new set of questions.

“For example, we can take the whole Talmud and ask, which words are used? Which phrases? Computers can analyze huge amounts of information and answer questions we wouldn’t have thought to ask 10 years ago, or which would have taken 10 years to answer.”

The lab will be open to all the humanities departments and others as well. “We hope it will help create an intellectual meeting point for scholars from different parts of the University to gather.”

CREATING AUTHORS WHO PUBLISH

Each year 12 to 15 students in the department are admitted to the selective creative writing program, where they practice writing fiction and creative nonfiction. The program is run by Prof. Shimon Adaf,

a well-known author with 10 novels and three poetry books to his credit so far.

The aspiring writers enjoy frequent input from many professional writers who give workshops and master classes.

“Almost every writer in Israel has come,” Adaf says, including Aharon Appelfeld ז”ל, Orly Castel-Bloom, Ruth Almog, Ory Berenstein ז”ל, Agi Mishol, and Asaf Gavron. Amos Oz ז”ל, Israel’s preeminent author, was a member of the faculty and taught classes regularly for many years until his recent passing. Both his and Appelfeld’s archives are housed in the Heksherim Institute. The contemporary short story writer Etgar Keret is a faculty member, as is poet Nidaa Khoury, and several other accomplished authors.

When he was asked to teach 10 years ago and came to BGU, Adaf was surprised. “I was truly amazed at the level of students.” Israelis begin college after military service, so the writing students are significantly older than their counterparts elsewhere. Some have already earned a bachelor’s

in literature or in another field and worked before deciding to study writing. “So we see a huge range of ages and different questions, life experiences and points of view.”



Prof. Shimon Adaf



Prof. Haim Weiss



Dr. Nirit Kurman



Prof. Amos Oz



Prof. Etgar Keret



Prof. Yigal Schwartz

The master’s candidates take writing workshops and classes in literature and academic studies that connect to their literary ambitions. “The end goal is for each student to finish the program with a manuscript—a novel, short story collection or poems. I send these projects to outside readers for review and feedback.”

What will graduates do?

“In Israel even successful writers can’t make a living,” Adaf freely acknowledges. “We support no illusions or expectations. But I believe most of them will go on and publish. We tell them that to be a writer you have to fight—make time, be committed. You must arrange your life to do this.”

HEKSHERIM: SAFEKEEPING ISRAEL’S LITERARY HISTORY

“The State of Israel emerged from the written word” is a mantra for Heksherim: The Research Institute for Jewish and Israeli Literature and Culture. It is headed by Prof. Yigal Schwartz, who built the Department of Hebrew Literature over many years and has stayed on to develop Heksherim, which is housed in the department.

Since 2001 this ambitious institute has been building a comprehensive research archive that represents “the first Israelis”—the authors, poets, playwrights, and scholars who began writing in Hebrew after Israel became a state, and those who have written since then. Already in the Archive are the work and related materials of

such esteemed Israeli voices as Amos Oz, Aharon Appelfeld, Ruth Almog and others, including original manuscripts, diaries, letters, artwork, and original artifacts.



Poet Prof. Nidaa Khoury

For Prof. Schwartz, the bond between the written word and Israel has profound meaning. “There’s a very tight connection between Hebrew literature and Zionism. Israel was based on Hebrew literature so we must do everything we can to expand the research and keep the literature flourishing.”

Schwartz observes in modern Israel a growing disinterest in culture and feels a mission to counter that trend. Many of today’s artists feel disengaged, he observes. They travel elsewhere; they read foreign literature. For the public, cultural opportunities are radically limited. “Other than in Tel Aviv, many places lack bookshops, coffee houses, cultural centers, a theater,” he notes.

“I want to change this situation—to convince people to read more, to be engaged with Hebrew culture from the Bible until now.”



Heksherim's exhibit on the life of Amos Oz, renowned author and BGU professor. The photo shows Oz as a baby with his parents.

Heksherim operates a publishing house that issues academic books and journals, as well as literature and

poetry “that no one else will take the risk of publishing,” Schwartz says. It has published about 100 books in the past

seven years and periodicals that include monographs on Israeli culture, a journal of Israeli and Jewish culture, and BGU Review—an online journal about Israeli culture in English (<http://in.bgu.ac.il/en/heksherim/Pages/BGU-Review.aspx>).

The Institute also runs a host of community outreach initiatives. Schwartz and his colleagues lecture around the world, hold conferences in Israel and internationally, run writing competitions, and stage poetry readings. They also bring lectures, conferences and workshops to Arad, a southern development town, through the Amos Oz Initiative for Literature and Culture. Currently in development is a Writer's House in Beer-Sheva. (See below)

Schwartz isn't done dreaming. “I hope to go into more communities and do more research.” He wants to research the old cultural centers of Jewish people from Jerusalem to Rome, Odessa, Yavna, and New York City in the 1920s. ■

Writer's House

BRINGING LITERATURE TO THE COMMUNITY

“Unlike other big cities in Israel, until recently, Beer-Sheva didn't have literary cultural institutions outside the University,” says Dr. Nirit Kurman. “But a lot of great things have happened in the last 10 years and now we'll have a Writer's House. We can reach people who would otherwise never be able to come to a lecture, or take a writing course, or spend an evening with an internationally known real-life author.”

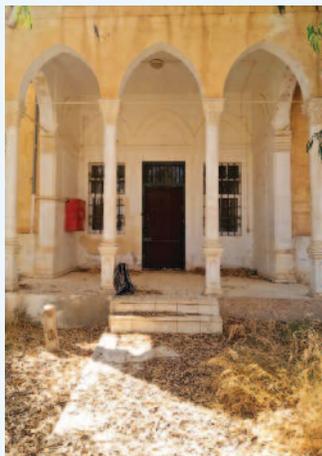
Kurman, who earned all three of her degrees in BGU's Department of Hebrew Literature, directs the new venture. The mayor of Beer-Sheva has donated a building in the city's historic district, which is currently under restoration. Heksherim will provide the activities thanks to the generous support of AABGU President Toni Young, who with her late husband, Stuart B. Young z”l, also makes the Amos Oz Initiative for Literature and Culture in Arad possible.

Writer's House will offer creative writing workshops for young writers and another one “for anyone interested,” Kurman says. Notable

authors will speak and workshop offerings will include writing plays, movies and children's literature. BGU students will participate with discussions of their research and the region's history.

“Today, very few people read,” Kurman says in explaining the role of Writer's House. “We want to show people that literature is open for everyone and encourage people to write. When you see an author who comes from a similar background, you think, ‘I can do that too!’”

Until its new home is ready in about a year, BGU runs programs on campus and in locations around the city of Beer-Sheva. “I'm already surprised at how many people are interested in what we're doing,” says Kurman. The most effective way of getting the word out? “Facebook. But the younger people are on Instagram, so we need to use that.”



To support Hebrew literature programs at BGU, visit: www.aabgu.org/donate-Hebrew-literature

BEER-SHEVA'S INNOVATION ECOSYSTEM

Continued from page 3

As a major hub for technology and cyber research, the region will see new high-level employment opportunities that will help keep both skilled BGU graduates and highly trained enlisted soldiers in the region.

Construction and support jobs associated with the new complex will further benefit the local economy.

All parties involved anticipate that joint initiatives combining academic, military and private industry expertise will produce technology and defense systems that will make Israel safer.

A PROPHETIC PLAN

Like a long-term resident welcoming new neighbors, the University has been working intensely on an action plan to facilitate the IDF's relocation and leverage the opportunities for BGU. To lead this effort, the University found the ideal candidate: Prof. Jacob Bortman, a retired air force brigadier general of 30 years and a member of the mechanical engineering faculty for a decade.

"I came to do research, and I love teaching," Prof. Bortman says. "But I became convinced that this was important and that I could contribute to the University."

At that time, the IDF move was speculative. The University leadership decided to assume the event would in fact happen. "So we did a strategic plan," Bortman says. "Just as when

I was given a new responsibility in the air force, I thought long range as far as I could. You make a dream, then go back to the current time and make a plan to get there. That's exactly what we did. We assumed we would have 30,000 excellent people around us and asked what could we possibly do? And the plan was prophetic."

The intent: leverage the IDF's move south to accelerate the University's development while advancing its academic ranking and position in Israel and improving the quality and

numbers of students at the University on all levels. Plus, strengthen BGU's position as a national leader.

After development and thorough vetting, the plan was approved by the University, the Ministry of Defense, the IDF, and other stakeholders. It outlined how existing University departments could collaborate with their new neighbor and expand selectively, and suggested ideas for new programs customized to IDF personnel. While the focus was initially on engineering and computer sciences, Bortman expects that many departments from health sciences to the humanities and social sciences will also be positively affected as the partnership develops.



Prof. Brig. Gen. (Ret.) Jacob Bortman, of BGU's Department of Mechanical Engineering, led BGU's preparation for the IDF's move south.

An architectural rendering of the new North Campus, supported by a \$250 million dollar campaign that will double BGU's footprint in Beer-Sheva. The premier project is a dedicated building for the Homeland Security Institute.



Beer-Sheva's Innovation Ecosystem: The Israel Defense Forces Technology Campus will sit adjacent to BGU's campuses and the Advanced Technologies Park, an industry R&D center spearheaded by the University that houses national and international corporations.

To put the plan into action, a steering committee was formed to represent every BGU faculty (college), IDF group and industry.

"We met every month or two and decided on several things," Bortman explains. "We first took responsibility for making IDF people who'd never been to BGU familiar with us. We set up roundtables combining IDF and BGU people on different subjects." These groups included faculty members from software engineering, computer sciences, communications systems engineering, cyber security, and information systems engineering.

"I knew from my air force work that people involved in electronic warfare, communication and airplane design need to stay familiar with new technology. We had sent high-level

"The IDF complex, BGU and the Advanced Technologies Park together create a powerful synergy reminiscent of California's fabled Silicon Valley. In fact, some commentators are calling the emerging high-tech powerhouse 'Silicon Wadi.'"

— PROF. DAN BLUMBERG

military personnel to universities to do research, give seminars—so it wasn't difficult to bring them to the table to discuss new ideas and programs with us at BGU. The faculty and officers began to know each other and started working together. They came up with ideas.

"We became like a family, working for the next generation."

Bortman's long-range view: "I believe that 10 years from now the connection between 30,000 top IDF people and the University won't be separable. People from the IDF will have labs in the University, working on needed research and contributing to BGU's level of expertise. We'll bring in the industries that want to work with us.

Mutual relations will be so good that everyone's capabilities will keep going up and up.

"For a long time people didn't think it would happen. Now we see the diggings for the groundwork. This move will make the south flourish and the time is now."

BUILDING BGU'S NEW NORTH CAMPUS

BGU is engaged in diggings of its own, an expansion planned in its own right that is being advantageously coordinated with IDF plans.

The new North Campus represents an investment of \$250 billion and will double BGU's footprint in Beer-Sheva. In recognition of its importance, the Israeli government has contributed \$15 million toward development, and AABGU has launched an initial \$250 million campaign.

The Homeland Security Institute building, the first edifice now under construction, will bring together researchers from various BGU faculties, says Prof. Dan Blumberg.

"We put a lot of thought into what to accommodate because we can't be home to all the elements that relate to it." Most of the space will go to information technology and labs devoted to fields such as remote sensing, imaging and image processing, satellites, and electro-optics. "We'll also have clean rooms that will house new state-of-the-art institutional equipment for HLS [heat, light and sound] research."

Blumberg believes the new physical space will encourage researchers to work more effectively with each other as well as with their new neighbor, the IDF. "BGU and the IDF won't be dependent on each other, but they will be able to facilitate more collaboration. Great ideas will come together."

Among the other firsts to be constructed on the North Campus include buildings to house computer science, structural engineering, robotics, general classrooms and laboratories, an energy center, and a new undergraduate village.



Prof. Dan G. Blumberg, BGU's vice president for industrial and regional development and director of the Homeland Security Institute

The North Campus will address a long-term problem for the University: existing buildings are at full capacity, and student housing and lab space is in especially short supply. This has affected BGU's development in some scientific and technological areas. The new complex will substantially remedy this situation and also accommodate the expected influx of IDF learners.

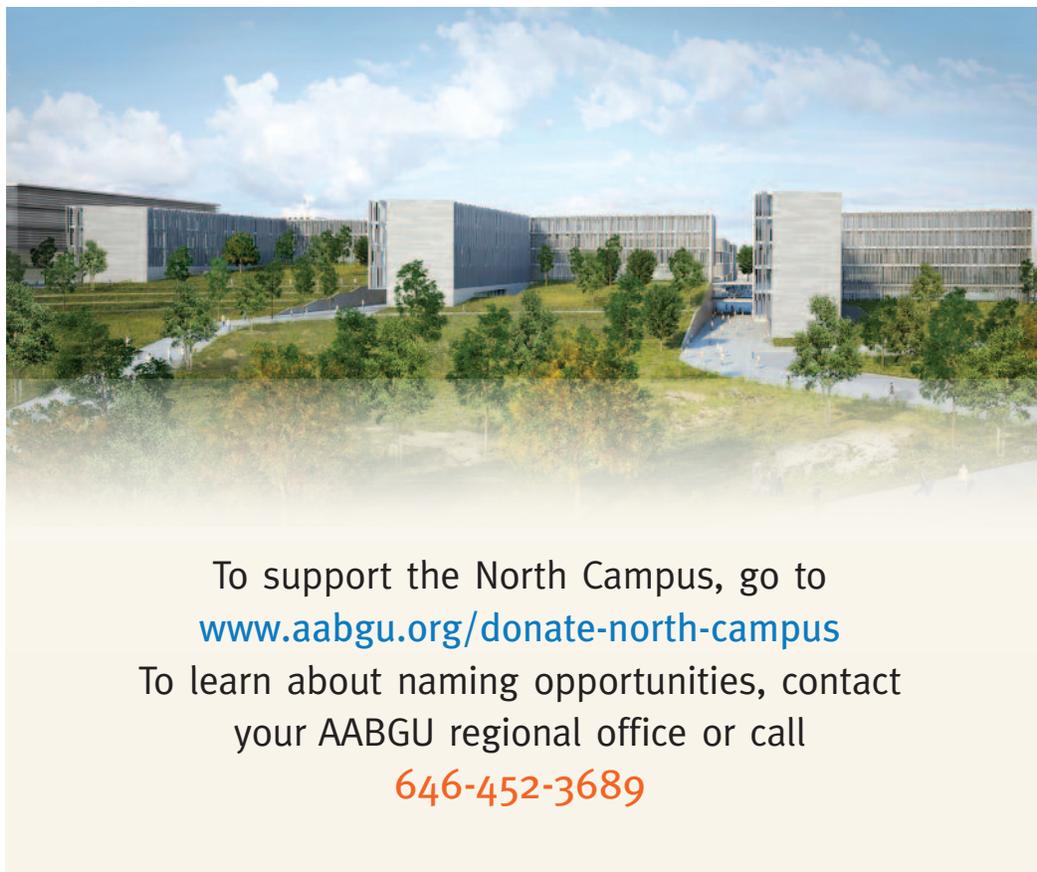
Some research areas will experience massive change in their capability, Blumberg says. Graduate students will particularly benefit from the new labs, and more of the best young people and top faculty will be attracted to University programs. Specialists in new fields are already being recruited in areas of information science, artificial intelligence, and even quantum physics

as relating to homeland security.

Planning for research domains that change so quickly is a challenge, Blumberg reveals. "We put together a whole team of experts that collected input from faculty members, and we based our plan on that. You plan as best you can for generic labs and know there will be adaptations."

Blumberg has no question about the big picture opportunities promised by the new ecosystem coming to life. "The IDF complex, BGU and the Advanced Technologies Park together create a powerful synergy reminiscent of California's fabled Silicon Valley. In fact, some commentators are calling the emerging high-tech powerhouse 'Silicon Wadi'.

"All the research will eventually supply better security and resilience to the State of Israel," Blumberg says. "We're fulfilling Ben-Gurion's dream of developing the Negev with science and we're also developing science in the Negev." ■



To support the North Campus, go to www.aabgu.org/donate-north-campus

To learn about naming opportunities, contact your AABGU regional office or call

646-452-3689



The Health Science Research Hubs Program

SOLVING MEDICAL CHALLENGES THROUGH UNCONVENTIONAL TEAMS

“TODAY WE CAN NO LONGER find great explanations by working in isolated labs,” says Prof. Amos Katz, dean of the Faculty of Health Sciences. “You must understand a medical problem’s scientific basis to find a better solution and tailor treatments to individual genetic and immunological responses. For this, scientists must connect with the clinical problems and work in teams across disciplines.”

Researchers tend to work in “silos” and seldom interact with other specialists; nor are they often exposed to the problems doctors face, Prof. Katz observes. For physicians, scant time is available to pursue research even if they have the training and interest. These disconnects undermine the progress of medical research globally. To address this basic challenge, BGU’s Faculty of Health Sciences (FOHS) is pioneering an initiative known simply as the Research Hubs Program.

The idea originated with Prof. Alon

Monsonogo, a neuroimmunologist (read about his work on page 9) and former vice dean of FOHS. “We can’t work in department incubators anymore. I really want to work with people from brain research and genetics, for example, not just immunology. We already have departments and multidisciplinary centers but need a way to change the culture of research and close the gap between research and clinic. We knew people wanted to be part of this interaction but lacked a structure.”

Four years ago, with enthusiastic support from University leaders, Profs. Katz and Monsonogo began planning such a structure. They envisioned a set of cross-disciplinary teams focused on significant medical needs likely to attract researchers and clinicians from a wide range of health sciences, plus outside experts such as engineers, computer specialists and psychologists. The first question: which topics to identify.

“Rather than presenting the faculty with a list, we chose the bottom-up approach and asked our members,” Katz says. “They came up with 10 hubs that started to organize and so far

one has been eliminated. We decided to support them all financially so they could meet, brainstorm, organize themselves as they wished, and research together.”

One rule is for hubs to be jointly managed by a two-person team representing both the research and clinical sides. Another principle was to define the hubs as fluid and non-permanent entities. Those that do not coalesce and become productive will be cut; others may shift their focus. After two years of laying the groundwork, Katz says most of the hubs are successful.

Nine Research Hubs

- | | |
|---|--------------------------------------|
| 1. Active aging | 6. Precision oncology medicine |
| 2. Autism | 7. Reproductive health |
| 3. Brain medicine | 8. Translational infectious diseases |
| 4. Community aspect of chronic disease management | 9. Wound healing |
| 5. Obesity and diabetes care | |

Top: Dr. Lior Shmuelof (right), co-director of the Active Aging Hub, and Dr. Oren Shriki from the Department of Brain and Cognitive Sciences

“This is cross-disciplinary research based on a whole new integration of research and application.” He believes this nonconventional model has the potential to transform medicine on the global scale, as well as on the community level. He anticipates work done by the hubs will lead to better understanding of the fundamental mechanisms of disease, improved diagnostic tools and innovative approaches to pressing medical challenges.



Prof. Amos Katz, M.D., dean of the FOHS, is a cardiologist, researcher and a former director of the cardiology department at Soroka University Medical Center.

Katz believes that medical education must adapt to the demands of today’s medicine as well. Coursework at the Joyce and Irving Goldman Medical School now includes research, and to earn their degree, students must complete a project. Also, a special track has been created for those who want to earn both M.D. and Ph.D. degrees, a highly prized combination. A two-year break for research is built-in.

The major reaction to the hub project has been positive, Katz says. “People have been working as part of the same faculty for years but didn’t know each other. We were surprised at how happy they were to be brought together when given time to meet and brainstorm. We’re already seeing results.”

Here’s a look at how three of the hubs are working.

SHARING WOUND HEALING PERSPECTIVES

Clinicians don’t often bring a need directly to researchers, Prof. Eli Lewis says, but recently a surgeon asked him if he had any ideas about tonsillectomy wounds that take too long to heal. “This is a straightforward need that’s under the radar. We thought we could do something.”

Prof. Lewis chairs the Department of Clinical Biochemistry and Pharmacology and is the director of the Clinical Islet Laboratory. In his own work on improving transplants



Prof. Eli Lewis, Ph.D., Ilse Katz Career Development Chair in Health Sciences Research

and reducing inflammation for type 1 diabetics, the post-operative aftermath is not traditionally defined as a wound.

“But the moment we created the hub, all the studies I’ve run for 10 years took on an added dimension. Now we see an organ transplant as a wounded organ, and we look at the impact of diabetic wounds on people. This is very fulfilling for us. It prevents the research from being too linear, too predictable when we plan what’s next.”

The Wound Healing Hub, which Lewis co-directs with plastic surgeon Dr. Eldad Silberstein, has involved community doctors, paramedics and the nursing school from the outset “because wounds end up in their hands.” The perspective widened quickly to include acute surgical wounds such as those suffered by soldiers, as well as infected wounds, chronic wounds, burns, scars, lesions, and pulmonary fibrosis.

Initially the hub was structured to hold monthly meetings of about 60 people who ranged from medical personnel to chemists, engineers, computer scientists, and more. But the topic proved even bigger than this “inside” group, so this hub organizes conferences.

In February, the hub brought together a particularly diverse set of speakers on the broad topic of fibrosis—the wound process gone wrong. Clinicians and researchers shared findings on topics such as lung fibrosis, fat transplantation, reconstructive surgery, immunology, and computation.

“It’s very inspiring to everyone,” Lewis says. Many invited experts question the relevance of their knowledge.

“They look at the subject list and say they don’t think they have anything to contribute. But without exception, they add their experiences and the discussion becomes very rich. We’re always blown away by the potential.”

An invited speaker who works on metastatic cancer, for example, voiced reluctance. “We told him that for a metastasis to travel it must undergo similar things to when a wound is closed. He spoke, and his contribution had a big impact.”

Grant applications are pending, and the pooled thinking has already drawn the interest of the European Research Council, which requested speakers. Industry has also found its way to the Wound Hub. After creating a material that rejects bacteria to be used in surgeons’ pockets, a design school asked the Wound Healing Hub specialists what other applications it might have.

“We’re working on making ‘active’ sutures from this sterile material—we’ll treat it with substances developed by hub chemists and make it quickly removable,” Lewis says.

If wound treatment is to be improved, bridging between the different fields is key, he believes. “In medicine, wounds generally fall between different topics and no one is an expert. We have a critical mass of specialists on very different things, each with one side facing wounds. It’s easier to stick to your own field of research. But in the end, you realize that we have to fill in the gaps of what medicine can provide. This requires a fusion. We’re opening up the connections.”

IMPROVING OBESITY AND DIABETES CARE

Prof. Assaf Rudich, Ph.D., M.D. and Dr. Idit Liberty co-direct the Obesity-Diabetes Hub. Prof. Rudich is a strong believer in the bottom-up approach to research that the hub leverages.



Dr. Eldad Silberstein, M.D.

“In academia and other institutions, we continuously respond to initiatives coming from above. There’s a real need for things to grow up from the bottom and reflect what people think is really important to do.”

Because the Faculty of Health Sciences is composed of people coming from different disciplines with different cultures and languages, “we become fragments, and it’s more and more difficult to create bridges and collaborations.” The hubs serve to generate the essential platform for interdisciplinary crosstalk, he finds.

Prof. Rudich and Dr. Liberty determined the hub’s main goal: to define the scientific questions for projects relating to obesity and type 2 diabetes that can be best addressed by experts from around the world, and for which grant funding is attainable. One pilot project is already “in action,” Rudich says, with support from a German consortium.

It addresses the question of whether the natural hormone oxytocin, which supports labor and lactation, has additional effects in the brain and the rest of the body. “Recent literature notes several metabolic effects that could make it useful for improving glucose control among diabetics,” he says. “It’s also suspected that it might have a legacy effect” (an impact that extends beyond the period of intensive treatment).

Prof. Rudich, a member of the Department of Clinical Biochemistry and Pharmacology, notes that a substantial percentage of people who are obese and also have type 2 diabetes experience diabetes remission after bariatric surgery. The team will explore whether treating people before surgery can enhance their chance of remission.

The group seeks funding for a large-scale project to identify markers for metabolic deterioration among non-diabetic obese people. This would focus on communities unique to the Negev and leverage the large database of the Clalit Health Fund, which insures

two-thirds of the people in southern Israel. The project would combine electronic medical data and use artificial intelligence and machine learning to generate a metabolic risk calculator. It is expected that eventually 10 clinics and 40 medical school labs will be involved with patient testing.

“Obesity is so prevalent, but some people are at high risk of diabetes and others are not,” Rudich says. “We’re not very good at predicting which people need to be approached more aggressively to prevent metabolic deterioration. We aim for an advance biotech tool that will increase our ability to identify those at high risk.”

The synergy this demands would be impossible without the hub’s interdisciplinary collaboration, Rudich says.

“This project really defines the mission as I see it. We want to have an impact relevant to medicine in general—but we also want to have a real immediate impact on our community.”

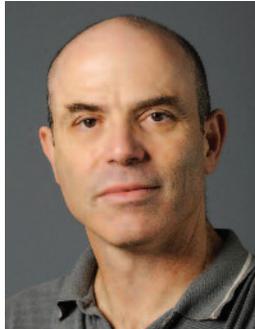
PROMOTING ACTIVE AGING

“Losing motor and cognitive function or being unable to walk or prevent a fall are huge problems in the world,” says Prof. Itshak Melzer, who co-directs the Active Aging Hub, along with Dr. Lior Shmuelof and Dr. Simona Bar-Haim. “Every year, one in three people over 65 will fall, and after 80, one in every two people will fall. It leads to physical, psychological and economic consequences.”

For the elderly—defined as age 65 and above—losing mobility can mean an inability to work, enjoy social opportunities and handle everyday tasks independently. According to the Center for Disease Control, the cost of falling in the U.S. is \$32 billion annually.

Many falls are preventable, Melzer believes. Understanding why they happen and finding practical ways to prevent them is one of the primary missions of the Active Aging Hub.

Prof. Itshak Melzer with his BaMPeR treadmill developed at BGU. It incorporates unexpected perturbations to help the elderly and stroke patients improve their balance.



Prof. Assaf Rudich, Ph.D., M.D.

Collaborating are 11 researchers from BGU’s Departments of Physical Therapy, Brain and Cognitive Sciences, Mechanical Engineering, Biomedical Engineering, Industrial Engineering and Management, and the Imaging Department at Soroka University Medical Center. Together, these specialists work on equipment to help people restore their motor function, balance and gait in the wake of aging or stroke, and engage in basic research to understand the brain’s mechanisms and interaction with the body.

One significant discovery is that in stroke patients who lose the ability to balance, damage can be detected in specific areas of the brain. This primarily includes the corticospinal tract, which is a motor pathway that connects the cerebral cortex to lower motor neurons in the spinal cord, controlling movements of the limbs and trunk. Parts of the brain that regulate preparation and execution of movement and influence learning are also visibly affected. “We are among the first to see this,” Melzer says.

The group has also found some encouraging surprises. The adage that old people are unable to learn new tricks has been proven false. “We found people can learn at any age. Balance is a skill we have naturally as children, but we lose it. It can and should be treated before people become elderly.”

Continued on page 35



Jusidman Science Center KICK-STARTING KIDS IN SCIENCE

EVERY WEEK, more than 1,500 middle and high school students from all over southern Israel come to a special building on the BGU campus, the Jusidman Science Center for Youth. In its labs and classrooms they study science, technology, math, and engineering. They engage in independent research, build robots, solve advanced math problems, and prepare for competitions in tough subjects like physics.

In this environment young people don't just thrive—they are transformed, says Dr. Tsiona Elkayam-Cohen, the Center's director. "Many are from families with no connection to the academic world. Their parents might not have the money to support an advanced education. For these kids we bridge the gap between high school and academia and give them the building blocks for their dreams."

The Jusidman Center was established in 2014 as a collaboration between the Jusidman family's Keren Daniel, BGU, the Ministry of Education, the Beer-Sheva Municipality, and the Rashi Foundation. Since 2017 it has occupied its own 32,000 sq. ft. building centrally located on the Marcus Family Campus. Many of the teenagers attend academic lectures at BGU, and some work in labs alongside the undergraduates.

Top: The Alpha group at a lab in the Jusidman Center. The high schoolers also participate in research projects in various BGU labs.

In addition to its professional teaching staff, the Center employs doctoral and master's students from the University. "It's easier for kids to learn from younger people—it helps them feel that they too can do this," Elkayam-Cohen says. "BGU students become their role models." In turn, the chance to teach gives graduate students good platforms to share their knowledge and improve their presentation.

For the Negev community, the programs are vital. "Israel has a number of youth centers," Elkayam-Cohen points out, "but from Ashdod on south, there's only the Jusidman Center. It's not just nice to have us, we must be there. If Israel is to develop the south, it's essential to offer opportunities equal to other regions. We try to see that every kid in the south knows about what we do and that they can be part of it, regardless of whether they have money."

Students and members of the faculty, as well as Elkayam-Cohen, visit high schools and other meeting points throughout the region to talk about the Center. Together with word of mouth and social media, their efforts are drawing a full mix of youngsters from different religious and cultural backgrounds. The diversity is valued. "Our first mission is education," says Elkayam-Cohen, "but when you bring in kids from all over the south, it's also a social platform for them to meet."

The Jusidman faculty revels in its

numerous success stories. An Ethiopian boy who found his way to the robotics team is a favorite example. "He arrived knowing no Hebrew and started studying it when he came here," Elkayam-Cohen recounts. "Four years later he speaks excellent Hebrew and he's captain of the group—a great role model!"

OUT-OF-THE-BOX THINKING

"It's really about opening up the world to them," says Dr. Ahuva Shkop, who teaches math to ninth- to 12th-graders in the Odyssey program. "When they start to understand the different possibilities, many are just shocked."



Alpha students on campus at BGU. On the left, Shahaf Efret, the program's social activities director

Seeing what they can become reshapes their ideas and ambitions."

Like other Center teachers, Dr. Shkop approaches her subject "in a deep way,"



Making a fix to their robot during the FIRST Tech Challenge

taking the kids out of the normal rule-based routine. “I teach the fundamentals and also logic and proof writing skills—not numbers and equations, but a mathematical way of thinking about things: logic, arguments, the language. It helps them see math in a very different way.” She gives her ninth graders difficult tasks such as constructing rational numbers as a field. “They start to see numbers not as existing inherently, but

as things than can be constructed to give us a way to express what’s going on around us.”

Along the way, many youngsters may feel overwhelmed by such challenges but this is part of the learning experience, Shkop says. “We want them to learn that things are hard but they can totally do it. Failure happens and they can move past it. They become independent learners driven by curiosity. We see them grow so much and come into their own.”

Depending upon the program, some of the youngsters come to campus for one full day per week or take daily classes; others plan their own team schedule for their workshop. Far from hurting their home school performance, the demanding and time-intensive commitment leads many Jusidman students to higher achievement in their regular high school curriculum.

“They are so talented and so thirsty and curious,” Shkop says. “Once they open their eyes, they’re just blown away

by the possibilities. They see that what they want to achieve is much harder without a system defined by rules, but they begin to realize they can do it. By the time they figure this out, they have so much faith in their future.”

BEYOND THE TOP FIVE PERCENT

Dr. Elkayam-Cohen’s ambitions for the Jusidman Center include creating a program for Ethiopian-Israeli middle schoolers and offering supplementary lessons in Hebrew as well as science. A teacher training program is also in development.

But most of all, Elkayam-Cohen hopes to expand the Center’s opportunities to serve a wider range of young people. “We have programs for the top five percent and 10 percent of students but not enough for the top 20 or even 50 percent. We look hard to find the talented kids but need to do more for the kids who are less talented.

“We want to touch those kids who may not become Ph.D. students but might be B.A. students. To touch every kid we can: It’s a Zionist mission.” ■

In Their Own Words...

Naama Shafir, Alpha Program

Seventeen-year-old Naama was excited to learn about Alpha, a BGU program that encourages gifted high school students to fall in love with science through hands-on lab action.

I really love science—even as a little girl I was always asking questions.

First, we went to camp at the University for two weeks and experienced science in different fields. We have all different kinds of people, but what connects us is that we’re all geeks and nerds in our souls—it’s who we are. There are 18 in my group and I can call every one of them my best friend.

We chose a biochemistry topic with a professor who mentors us. My team is trying to make a mutation of a protein that inhibits cancer cell mitosis. Most of my friends are pouring stuff, but my job is coding on the computer. I look at the mutations, see how they interact with the protein, and score their affinity, name them. It’s really fun. The most exciting thing is that BGU students see me coding and come to me for help.

At the end we reported on our research together, which gave me five credits toward my high school diploma. And I got the chance



to show my poster at the annual meeting of the Israeli Chemical Society! A BGU chemistry professor asked me to come to his lab and learn about his work so I could develop and perform a new method for his research (super exciting)!

Next step for Naama: “I hope in the military I can work on the computer and do coding. After the military I want to keep learning and will definitely go to a university.”

Maya Karai, Robotics Team

Seventeen-year-old Maya participated in the FIRST Tech Challenge, which puts eighth- to 10th-graders to work creating robots for competition.

I never even thought about this as a direction for my life, but now I want to build machines and robots, maybe teach.

We have six months to build a robot according to the rules of the global organization that runs the competition. Last year we had to build a robot that collected small boxes and arranged them according to color. We won a first place in the entire world—my first trip to the U.S. and the best week of my life!



Continued on page 35

IDAN ZU-ARETZ

SodaStream: Diversifying for a Better World

YOU MAY HAVE SEEN it in a store's small appliance section or you may own one: a SodaStream home carbonation system that makes sparkling water on demand. But you may not know that the company is an Israeli success story, and that its chief operating officer, Idan Zu-Aretz, is a BGU graduate who holds both a B.Sc degree in industrial engineering and an MBA from the Guilford Glazer Faculty of Business and Management.

Zu-Aretz joined SodaStream international in 2017, following 20 years at Intel where he rose to top management positions. "I felt my time was right to make a change and move from a huge company to a role where I'm part of headquarters and have stronger influence," he says.

"I wanted a potential for growth, but also a company that closely aligns with my social values." Beyond promoting the sparkling water-makers as better for human health and the planet, SodaStream actively works to develop a diverse workforce.

As chief operating officer, Zu-Aretz's responsibility is to ensure on a day-to-day basis that the immense production machine turns out high-quality products and that the employees stay safe. His role is also strategic. "I'm planning for the future and how to make sure the company is ready for growth and new directions, leveraging new technology."

This duality suits him. "I was always interested in engineering but debated between electrical, computer and industrial. I realized I wanted to do something in management, the people side, so decided on industrial engineering and information systems. The combination of high-tech and people was what I was looking for."



"BGU creates a magical connection—an inclusion that's a huge and unique advantage."

— IDAN ZU-ARETZ

SodaStream today markets in 46 countries and employs 3,100 people. Most work in the south near Beer-Sheva, where the factory is located. Recently SodaStream was bought by PepsiCo. "It's a huge statement of confidence of where we've been and can go," says Zu-Aretz. "Nothing will change; we'll still manufacture in Israel, but this will accelerate our growth—we're all excited."

He likes to hire BGU graduates. "They have a good orientation to industry, legs on the ground. They're not just talking theory—they know what's going on."

He recalls his own decision to attend BGU as "the wisest thing I ever did.

My girlfriend was studying there and I thought, why not? On one side, my experience was that I got two good degrees based on a strong connection to the actual trends of the market. The other side was the amazing social life, the atmosphere, the community of students." The romance worked out too; he and his girlfriend married and are the parents of four children.

Zu-Aretz especially values the sense of social commitment he felt at the University. "BGU creates a magical connection—an inclusion that's a huge and unique advantage. You see Jews, Bedouins, immigrants, all parts of Israeli society, and BGU embraces that."

He revels in the same spirit at SodaStream. "When you walk the assembly lines you see the diversity—Bedouins from Rahat, a Palestinian manager, Jews, all working side by side—no issues."

In his personal life, Zu-Aretz is closely involved with an organization called the Fox Society. This interest developed in the wake of his army service with a prestigious special unit. "My team chose successful people from every background to join. Some came from bad neighborhoods, or families without money. When they finished this elite service, we wondered, where would they go back to? We want to make sure they keep doing well." Without salaries or overhead, the nonprofit helps those leaving the unit continue their success with college scholarships, coaching and job networks.

Zu-Aretz is pleased to revisit BGU these days and keep the industry-academia connection going. "Each time I go back with a smile on my face. I tell the young people that I believe in the strength and power of industry in Israel—our startup nation spirit and high-tech innovation. I believe industry should be the driver of southern Israel, using technology to create a competitive advantage. In the end this creates jobs.

"And it's how we can employ people who've never been part of the job market and build inclusion and diversity. This is the way to change society." ■

GREAT LAKES

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NEW FANS FOR BEN-GURION'S VISION

A fabulous screening of the award-winning documentary “Ben-Gurion, Epilogue” was shown last winter at the exclusive Soho House Chicago. With a packed room of longtime supporters and many first-time attendees, the audience was transported to the Negev circa 1968 for an intimate conversation with David Ben-Gurion. Many of those in attendance remarked how interesting it was to glimpse such a personal side of Israel’s founder and first prime minister and how inspired they were to plan a visit to the University that bears his name.

PARTNERSHIP IN THE NEW YEAR

In cooperation with the Standard Club, Chicago’s oldest and most revered city club, AABGU hosted “Burgers, Beer and Ben-Gurion” in January. Featuring a screening of “Ben-Gurion, Epilogue” as well as an introduction and talkback by Great Lakes



1. Craig Simon, AABGU board member and Zin fellow; Robyn Schneider, Great Lakes regional director; and Zin Fellow Eric Simon at Soho Club Chicago for the screening of “Ben-Gurion, Epilogue” 2. Stacy Derby and Robyn Schneider at the Soho House 3. Rachel Goodman Sturges and Rush Sturges enjoying “Burgers, Beer and Ben-Gurion” at the Standard Club, Chicago 4. Zin Fellow David Harkavy, Michael Schmitt and Josh Kantrow at “Burgers, Beer and Ben-Gurion”

Regional Director Robyn Schneider, the event included a fun meet-and-greet around burgers and craft beers.

NEGEV-INSPIRED ARTISTRY

After visiting BGU last year, renowned sculptor Richard Edelman was so impressed by the University that he was inspired to create a piece of art reflecting its world-class research.

He was also fascinated by the ancient petroglyphs he saw in the Negev and by the concept of “defensiveness and vulnerability that characterize the field of cybersecurity.”

The result is Edelman’s latest work, a brass sculpture titled “CYBERGLYPH,” which made its U.S. debut at the JCC Milwaukee as part of a month-long focus on his work. The “reveal” reception on May 1 was

hosted by Nina and Richard Edelman and co-sponsored by AABGU and the JCC Milwaukee, featuring remarks from the artist as well as AABGU Chief Executive Officer Doug Seserman. Included was a photography exhibit depicting the evolution of BGU from its rock-and-sand beginnings to today’s modern, high-tech campus, plus a series of photographs showing the evolution of the sculpture. CYBERGLYPH will be installed on BGU’s Marcus Family Campus in Beer-Sheva on July 3.

LEARNING WHILE LUNCHING

Great Lakes Regional Director Robyn Schneider was privileged to speak about the evolution of the Negev to the Omaha Jewish community as part of their monthly “Eye on Israel” lunch program. Many attendees remarked at how much new information they learned about a country they hold so close to their hearts.



Artist Richard Edelman with CYBERGLYPH, his new sculpture to be installed this summer at BGU. Photo by Debra Zarne

GREATER NEW YORK

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The Greater New York Region hosted its annual Chanukah program, recognizing members of the Asarot and Living Legacy Societies. AABGU President Toni Young introduced Dr. Lonia Friedlander, who shared highlights of her postdoctoral research, which focuses on the remote detection and mapping of soil contaminated by trace metals. She also talked about her special experience at BGU.

Guests were also treated to a virtual visit with five students from BGU’s Medical School for International Health (MSIH) in Beer-Sheva. Together, Dr. Friedlander and the students led everyone in lighting the Chanukah candles and singing holiday songs. Dr. Lynne Quittell, director of the North American office for MSIH, spoke about this unique medical school.

Taught in English, MSIH is the only medical school in the world that incorporates global health components throughout its curriculum. With targeted courses and internships across the globe, the school prepares future physicians to address complex global health concerns and practice medicine across cultural, geographic and technological boundaries.

Following the presentation, new members of the Asarot and Living Legacy Societies received a beautiful certificate expressing AABGU’s appreciation for their continued support. Asarot means “tens” in Hebrew, and its members are part of a special group of donors who have contributed 10 gifts or more to AABGU over the years. Living Legacy Society members are those who have

thoughtfully included BGU in their estate plans.

In April, friends were treated to a “Lunch and Learn” with Prof. Alon Monsonogo from BGU’s National Institute for Biotechnology in the Negev. Drawing on his unique background in both neurobiology and immunology,

he gave a fascinating talk on “How Your Immune System Shapes Your Aging Process and Your Risk for Alzheimer’s.” Prof. Monsonogo believes that the answer to slowing and possibly preventing Alzheimer’s will be based on immunotherapy in the form of vaccinations.



1. Eliezer and Sherry Hyman, enjoying Chanukah with AABGU 2. Dr. Lonia Friedlander, sharing her research and recalling her days at BGU 3. Thanks to live video technology, students from BGU’s Medical School for International Health join in singing Chanukah songs. 4. Mark Wilner and Marvin Israelow (far left) and Hadassah Weiner (far right) were, among others, celebrated for their Asarot Society achievement at the Chanukah party. AABGU President Toni Young and Doug Seserman, chief executive officer of AABGU, are also pictured.



GREATER TEXAS

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 Dr. Michael Ozer, *San Antonio Chair*
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“BERNSTEIN IN BEER-SHEVA”

The ballroom of the Royal Sonesta Hotel in Houston was filled to capacity on February 24, 2019 when AABGU hosted its 18th Gourmet Kosher Extravaganza titled “Bernstein in Beer-Sheva: Concert in Courage 1948.” It was a night of great music and an extravagant four-course feast—from smoked brisket empanadas to coriander crusted sea bass to Israeli-style baklava and more—prepared by four of Houston’s top chefs and all deliciously kosher!

The event benefitted BGU’s Medical School for International Health (MSIH). A fascinating slide presentation by Dr. Lynne Quittell, director of MSIH’s North American office, detailed how graduates are impacting global health in extraordinary ways around the world.

Prof. Danny Chamovitz, BGU’s new president, made a rousing speech that showcased his personal warmth and great enthusiasm for the University and the Houston community.

But the highlight of the evening was the musical tribute to Leonard Bernstein, whose 100th birthday is being celebrated this year. The mistress of ceremonies, Courtney Z. Haas, a CBS correspondent, told the story of Bernstein’s heroic visit to the Negev in 1948. In defiance of a United Nations decree that Beer-Sheva be evacuated, Bernstein

traveled to the city to give an outdoor concert to thousands of residents and soldiers. This gathering, as seen from the air, confused the Egyptian troops, who thought Israeli soldiers were marching on Beer-Sheva, a wrong assumption that caused them to abandon their posts further north. Ultimately this retreat helped turn the tide of the War of Independence.

Vocal soloists Meir Finkelstein and Alicia Gianni, accompanied by the Richard Brown Orchestra, treated the crowd to powerful renditions of songs from Bernstein’s “West Side Story,” “MASS” and “Candide,” as well as Jewish-themed music.

Earlier in the evening, a private Founders Reception celebrated those who have made major philanthropic contributions to BGU. This honorable group was joined by Sylvester Turner, the mayor of Houston; Prof. Danny Chamovitz; Dr. Lynne Quittell; and AABGU’s Chief Executive Officer Doug Seserman.

Participants praised the evening. “Just got home and cannot even undress before I tell you how wonderful the evening was...every talk, picture, food course, vocal, orchestration, video, the room, the centerpieces!!! All of it was just masterful,” said one attendee.

It was, as another guest remarked, “a truly magical evening!”



1. A Texas roundup at the Extravaganza: BGU President Prof. Danny Chamovitz, donning his newly gifted 10-gallon hat; Deborah Bergeron, AABGU Greater Texas regional director; Dr. Lynne Quittell, director of the North American office of MSIH; Sylvester Turner, mayor of Houston
 2. Stephen Breslauer, flanked by Robin Stein (left) and Elizabeth Grzebinski, regional co-chairs
 3. Ellen Marcus with her husband, Harvey Malyn (left), and Doug Seserman, AABGU chief executive officer
 4. Elya Naxon and Shlomo Friman attend “Texas’s Looming Water Crisis: How Israeli Tech Could Save the Day” at the SMU Tower Center in Dallas. The event featured Dr. Edo Bar-Zeev of BGU’s Zuckerberg Institute for Water Research.
 5. Meir Finkelstein, singing Bernstein’s “Tonight” with the Richard Brown Orchestra, raising the rafters with his marvelous tenor voice

MID-ATLANTIC

Connie and Sam Katz, *Regional Chairs*
 Jack R Bershad, *Chair Emeritus*
 Dr. Barry Kayne
Delaware Chapter Chair
 Michele and Robert Levin
Philadelphia Chapter Chairs
 Sherrie Savett
Philadelphia Chapter Vice Chair
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A FAMILY TRIP FOR THE COMMON GOOD

Eileen and Ira Ingerman, longtime benefactors of BGU's Ginsburg-Ingerman Overseas Student Program (OSP), together with their family group of 24 children and grandchildren, visited the Marcus Family Campus during their recent trip to Israel. They were greeted by then-President Prof. Rivka Carmi at the Ben-Gurion Society Wall.

After a brief walking tour of the campus en route to the National Institute for Biotechnology in the Negev, the family visited the laboratory of Prof. Lital Alfonta of the Department of Life Sciences. There, students arranged a short and simple experiment for the grandchildren to conduct. The visit ended with lunch and a briefing with the director, coordinators and students of OSP.

"I have been involved with BGU since 1983," Ira Ingerman says. "For me, it started as my way to give back for the success I've had. My wife, Eileen, and I always favored education in our charitable endeavors. Our hope was that the OSP program would bring students to BGU from the U.S. and help them feel more connected with Israel."

Remarking on their family visit in 2009, Ira noted, "My grandchildren were very young then. This trip was an opportunity to have them come back and expand their feeling for Israel. We definitely accomplished that, and our entire



Top: Eileen and Ira Ingerman (front row, third and fourth from left) next to Prof. Rivka Carmi, M.D., surrounded by the extended Ingerman family on BGU's Marcus Family Campus **Left:** Delaware Chapter Associate Chairs Lela and Dr. Stuart Nemser met with several scientists at The Jacob Blaustein Institutes for Desert Research, including Prof. Simon Barak (right) during a recent trip to Israel. Dr. Nemser serves as chair of the Goldinger Trust, managed by the Jewish Federation of Delaware. The Trust has generously supported a variety of agricultural research projects at BGU.

family considered this a great experience."

The Ginsburg-Ingerman OSP, co-funded with Arlene and Stanley Ginsburg (see page 7), is a unique study abroad program offering a world-class academic experience and opportunities to connect with international and Israeli students on a vibrant campus.

Ira serves as treasurer on AABGU's national board and is a member of BGU's board of governors.

SHARING BEN-GURION'S VISION

In partnership with Temple Beth Hillel-Beth El in Wynnewood, Pennsylvania, nearly 100 people attended brunch and enjoyed a screening of "Ben-Gurion, Epilogue" in December. In March, in collaboration with the Southeast Region, this award-winning documentary was screened at Bocaire Country Club in Boca Raton, Florida. We are thankful to the numerous Mid-Atlantic sponsors who helped underwrite the luncheon. Additionally, in partnership with the Jewish Federation of Delaware in Wilmington, the movie was shown in April, thereby sharing David Ben-Gurion's vision for Israel's future with numerous new friends.

IN MEMORIAM

Harriet Soffa Prized Beyond Rubies

Passionately dedicated to the development of AABGU and BGU for over 35 years, Harriet Soffa, who served on BGU's board of governors,



AABGU's national board and as Mid-Atlantic region chair, passed away on January 5, 2019. In the words of Prof. Avishay Braverman, a former president of BGU: "She was a beautiful, noble and humane queen, a role model for young children, demonstrating through her life what is the true way to serve people and God. Her memory will be carried by so many young people whom she helped transform in the Negev."

NEW ENGLAND

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NEW AUDIENCE FOR BEN-GURION

AABGU partnered with the Jewish Community Alliance (JCA) and the Maine Jewish Film Festival last November for its first-ever event in Portland, Maine. Hosted at the JCA in South Portland, more than 70 members of the community enjoyed a screening of “Ben-Gurion, Epilogue,” followed by a riveting discussion with BGU Prof. Emeritus Ilan Troen, who is also the founding director of the Schusterman Center for Israel Studies at Brandeis University.

Prof. Troen provided insight into Ben-Gurion, the man, as well as Ben-Gurion, the founding father of Israel, and how much his vision of the role of a university in the Negev is coming to fruition, evidenced by the development of industries and communities around BGU and throughout the region. Some participants shared their own memories of Ben-Gurion, while younger members of the audience learned about him for the first time.

AABGU is excited to continue partnering with Portland and its growing community of BGU supporters. Though the Jewish community in Portland, is small, it is very devoted, with four synagogues and a Chabad center as well as a Jewish day school up to the eighth grade. One of the older members of the community mentioned how thrilled he was to see so many people who want to support Israel and BGU and how the event made him feel part of the community.



1. At the Maine Jewish Film Festival in Portland: Prof. Ilan Troen (center) with Drs. David and Melissa Hurst, supporters with other family members of the Lynn and Lloyd Hurst Family Chair in Urban Studies
 2. Senior Philanthropic Manager Eve Rubenstein during a recent trip to BGU
 3. Betsy and Alan Levenson in Dr. Debbie Toiber's lab

A BIRTHDAY DREAM AT BGU

Fulfilling a desire to visit the University and see the students and research firsthand, Alan and Betsy Levenson visited BGU last November to celebrate Alan's 85th birthday. Among their stops: the lab of Dr. Debbie Toiber, of the Zlotowski Center for Neuroscience, whose team is researching neurodegenerative diseases and their relationship to cancer. The couple also enjoyed traveling throughout the Negev to learn about the University's impact on the entire region.

Please join us for inspiring and educational events throughout the year where you can meet dynamic members of BGU's faculty, learn about the groundbreaking research taking place at the University, and enjoy spending time with friends and supporters of AABGU. Upcoming programs will feature BGU's medical research, student innovations and information on estate planning.

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L'CHAIM FROM THE NEGEV

It's no secret that Israel produces great wine in the northern part of the country, with lush vineyards in the Galilee and the Golan Heights. But now a viable wine industry is burgeoning in the Negev Desert, thanks to help from scientists like Prof. Aaron Fait of The Jacob Blaustein Institutes for Desert Research. An expert in plant metabolism and the stress response of wine grapes, Prof. Fait is making great strides in the research of desert viticulture, enabling growers to produce outstanding wines in southern Israel despite the harsh arid climate.

At two San Francisco Bay Area events, Prof. Fait spoke about his work and led Negev wine tastings. The first gathering, hosted by Susan and Nate Saal at their Palo Alto home, included a discussion about the history of Negev winemaking in ancient times and the science that makes the tradition possible today. Guests enjoyed tasting both red and white wines from Ramat Negev Winery and Nana Estate Winery, located in different areas of the desert.

Prof. Fait also spoke at an Israel-inspired luncheon hosted by AABGU supporters Sherry Morse and Fred Hertz at Covenant Winery in Berkeley, the only winery that produces wine in both California and Israel. Prof. Fait, together with Covenant's owner and winemaker, Jeff Morgan, described the Negev's different *terroirs* (a French wine term referring to the specifics of a land) and compared them to those in the northern part of the country where the grapes are grown for Covenant Israel. As the different courses were served by Chef Arnon Oren, the flavors of feta, tahini and sumac were complemented by wines from both regions.

FROM THE NEGEV TO THE MOJAVE

A delegation of a dozen supporters from the Northwest traveled to Las Vegas to participate in the AABGU National Mid-Winter Meeting and BGU Symposium: Making the Desert Bloom Israeli Style. The symposium, held at the renowned Springs Preserve outside

downtown Las Vegas, shed light on how BGU's research in water technology, desert agriculture and solar energy could make a positive impact on sustainable living in the Negev, the Mojave and drylands around the globe. Afterwards, the group enjoyed a walk through the grounds of the Preserve.



1. BGU Prof. Aaron Fait (far right) enjoying wines from the Negev with BGU Board of Governors members Harry and Carol Saal (front) and their son and daughter-in-law, Nate and Susan Saal
 2. Gina and Dan Waldman at the Springs Preserve
 3. Luncheon Co-Chair Sherry Morse, Prof. Aaron Fait, Co-Chair Fred Hertz, and Jeff Morgan in the Covenant Winery tasting room
 4. Enjoying the Springs Preserve in Las Vegas: Riki Dayan; Steve Hurst, BGU board of governors member; Sonny Hurst, former AABGU regional chair and board member; and Coby Dayan, AABGU board vice president
 5. AABGU national Board Member and Zin Fellow Marci Dollinger brought her husband, Marc, and daughter, Shayna, to BGU for a day of inspiring meetings with students and faculty.



SOUTHEAST

SOUTHEAST ADVISORY COMMITTEE

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Billy Joel, Edward Kaplan, Jan Liff,
Alan Newman, Joel Reinstein,
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LUNCH WITH BEN-GURION

On a beautiful afternoon at the Bocaire Country Club in Boca Raton, Florida, more than 130 people gathered for “Lunch With Ben-Gurion.” Following a delicious lunch and a brief ceremony recognizing donors came the highlight of the afternoon: the screening of “Ben-Gurion, Epilogue.”

This award-winning documentary brings to life David Ben-Gurion’s introspective, soul-searching vision for the future of Israel—so far-sighted that it is relevant to the crucial decisions of today, decades after his death.

This fascinating film came to be when the lost soundtrack of a six-hour interview conducted with David Ben-Gurion in 1968 was discovered in the University’s Ben-Gurion Archives. It was matched with a filmmaker who had the original film footage and was looking to recreate the interview.

AABGU’s Chief Executive Officer Doug Seserman introduced the film and conducted a talkback at the conclusion of the movie that led to discussion about today’s Israel, its great accomplishments and its current challenges. “Ben-Gurion, Epilogue” has been shown several times in AABGU regions and will continue to be shown under the organization’s auspices to audiences around the country.

We are thankful to a leadership team of co-chairs from AABGU’s Mid-Atlantic and Southeast regions and 21 event



1. AABGU leaders and staff at “Lunch With Ben-Gurion”: Rita Agron; Event Co-Chairs Mervin and Harriet Hartman; AABGU Chief Executive Officer Doug Seserman; Event Co-Chairs Ann Waldman and Marilyn and Ed Kaplan; Mid-Atlantic Regional Director Claire Winick; and Event Co-Chair Bob Dunn
2. Enjoying the insights of David Ben-Gurion are Arlene Ginsburg; Dorothy Wasserman, event co-chair; Robert Wolf; and Event Co-Chair Ann Waldman. 3. Bob Dunn congratulates Anita Feinstein as she receives the Asarot Society certificate during the donor recognition ceremony. 4. AABGU Board Member Billy Joel and his wife, Sandra, hosted a farewell luncheon for outgoing BGU President Prof. Rivka Carmi, M.D. Pictured are: Mytyl Simancas, Zin Fellow; Adam Tiktin, Zin Fellow; Israel Consul General in Miami Lior Haiat; Lenny Roth; Prof. Rivka Carmi, M.D.; U.S. Congresswoman Donna Shalala, who holds a BGU honorary doctorate; Billy and Sandra Joel; and Gary and Carol Moss.

sponsors. They made it possible to share the mission of BGU with many new friends, hopefully engaging them in the future of Israel that is unfolding today in the Negev region.



NEW REGIONAL DEVELOPMENT DIRECTOR

AABGU introduces Sissy Zoller, the new regional development director serving the Southeast Region. Sissy has been a member of the AABGU team since 2010, working in marketing, donor affairs and development. “I look forward to sharing my passion for BGU, the Negev and Israel in this new role,” says Zoller.

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PROF. RIVKA CARMİ SAYS FAREWELL TO LOS ANGELES

Former BGU President Rivka Carmi was celebrated at dinner parties hosted by several groups of longtime donors and friends, including Larry Field, Lisa Field, Robyn Field O'Carroll, and her husband, Anthony O'Carroll, at the Waldorf Astoria Hotel; and Ruth Flinkman-Marandy and Ben Marandy and their family at the Beverly Hilton Hotel.

Members of the Diane and Guilford Glazer Foundation hosted a lunch at the Il Pastaio Restaurant in honor of Prof. Carmi to celebrate their many years of friendship and close association with the University.

WELCOME TO PRESIDENT PROF. DANNY CHAMOVITZ

In mid-February, the Southwest Region welcomed BGU's new president, Prof. Daniel Chamovitz, where he was introduced to a number of supporters and shared his vision for the future of BGU.

SMALL ATOMS, BIG SOLUTIONS

Prof. Yuval Golan, director of BGU's Ilse Katz Institute for Nanoscale Science and Technology, gave a fascinating talk titled "Small Solutions to Big Challenges: Advances in Nanoscale Science and Technology," exploring how atoms and molecules are providing the tools for solutions ranging from targeted medical treatments to homeland security applications. The event took place in the private tasting room at the Margerum Wine Company with supporters of the Jewish Federation of Greater Santa Barbara.

SHARING ADVANCES IN AUTISM RESEARCH

Dr. Ilan Dinstein, director of BGU's National Autism Center in Israel, spoke on "Advances in Autism Research and Treatment: Insights From the Israeli Desert" at Congregation Beth El in La Jolla, California.

IMPROVING WATER AND FOOD SECURITY

Prof. Noam Weisbrod, director of The Jacob Blaustein Institutes for Desert Research, gave a series of socially significant talks throughout the Southwest region. His topic was "Water and Food Security in Israel and Beyond: Can We Do Better?" Some of the venues included the Men's Club of Temple Sinai in Las Vegas, Nevada; Valley Beit Midrash in Phoenix, Arizona; Congregation Beth Tefillah in Scottsdale, Arizona; and the home of Susan and Paul Stander in Paradise Valley, Arizona.



1. Rivka Seidan, Larry Field, Prof. Rivka Carmi, and Lisa Field at the Waldorf Astoria Hotel in Beverly Hills 2. Nancy Krasne; Doug Seserman, AABGU, chief executive officer; Prof. Rivka Carmi; Jim Krasne; John Fishel; and Bill Neiman at the Il Pastaio Restaurant, Beverly Hills

3. Judge (Ret.) Leon Kaplan; Doug Seserman, AABGU chief executive officer; and Prof. Daniel Chamovitz, president of BGU, at the Beverly Hilton Hotel to sign-off on the judge's latest major commitment to BGU 4. Jeff Polak, AABGU national board member and Zin fellow; Prof. Daniel Chamovitz, president of BGU; David Polak 5. Michael Rassler, executive director, Jewish Federation of Santa Barbara (JFSB); Andrew Hoffer, AABGU southwest associate director; Mike and Dale Nissenson (event hosts); Prof. Yuval Golan; and Laini Millar Melnick, president of JFSB, at the Margerum Wine Company in Santa Barbara

WASHINGTON/ BALTIMORE

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THE NEGEV: THEN AND NOW

The Washington/Baltimore Region partnered with Friends of the Israel Defense Forces (FIDF), Baltimore chapter, for a joint program in December titled “The Negev: Then and Now.” With over 50 people in attendance, AABGU supporter Mitch Gold, who is also the president of the FIDF’s Baltimore chapter, began with a presentation of amazing photos from the 60s when he and his parents lived in Beer-Sheva. Mitch also experienced the Six Day War and showed memorabilia from that time, including

shell casings and old IDF helmets. Washington/Baltimore Regional Director David Speer followed with a slide show depicting the development of the region, thanks in large part to Ben-Gurion University.

VEGAS, BABY!

February’s AABGU’s Mid-Winter Meeting in Las Vegas brought out 16 supporters from the region, many of whom agreed that the Mojave Desert setting was the next-best thing to being in the Negev. Highlights included a special presentation from new BGU President Prof. Danny Chamovitz, who charmed the audience with his enthusiasm and vision for BGU. Also enjoyed was “Making the Desert Bloom Israeli Style”—a BGU symposium on water and desert research.

WATER AS A PEACEMAKER

Prof. Noam Weisbrod visited the region in February to speak on “From the Desert for the World: Israel’s Water Innovations,” an event co-sponsored by the Jewish Community Relations

Council of Greater Washington and the Maryland/Israel Development Center. Prof. Weisbrod highlighted BGU’s unique additions to the field of water and desert research, including his vision for BGU’s expertise to become an engine for peace across the region.

MEDICAL CAREERS BEYOND BORDERS

Local alumni from BGU’s Medical School for International Health (MSIH) gathered in March to reminisce and hear recent updates from Dr. Lynne Quittell, director of the North American Office of MSIH. The idea for the alumni happy hour had been spearheaded by Lt. Col. Brian Neese, M.D., M.P.H. (MSIH class of 2005), who presently serves as global health liaison for the Pentagon’s U.S. Air Force International Affairs Division. All who attended were happy to reconnect and swap stories about their unique experiences at MSIH that prepared them to practice medicine in any situation around the world. The gratitude all the graduates felt for their chosen career path and training was palpable.

GREETING THE NEGEV IN DC

The Washington/Baltimore Region welcomed AABGU friends and supporters from across the country for a reception following the opening plenary of the 2019 AIPAC Policy Conference, hosted by Joel Reinstein from the Southeast Region. The gathering was a great opportunity to connect with old friends and introduce new ones to BGU’s role in shaping the future of the Negev and Israel. We are very grateful to AABGU Board Member Peter Schechter and his wife, Rosa Poech, co-owners of Zatinya, one of DC’s hippest restaurants, where the reception was held.



1. DC area supporters Leena and Erwin Groner with Dr. Adi Portughies, director of infrastructure information systems at the Ben-Gurion Archives, overlooking the Zin Valley at BGU’s Sede Boqer campus 2. Peter Schechter, member of AABGU’s board of directors and BGU’s board of governors, with his wife, Rosa Puech, and BGU’s new president, Prof. Danny Chamovitz, at the Mid-Winter Meeting in Las Vegas 3. Baltimore area supporter Mitch Gold with Regional Director David Speer at “The Negev: Then and Now”

In Their Own Words... *Continued from page 24*

This year the mission was called 2019 Deep Space. We built a robot that collects small cubes and balls, sorts them in boxes and hangs them up. We participated against 40 teams in the Israeli championship in February and won two awards.

There are 10 of us from six different cities and villages, united by this love to learn and study. What's special is we learn a lot of things in one place: programming, mechanics, design, marketing, fundraising. And we learn to talk and compete in English.

I think this is the hardest work I've ever done but the most fun. We feel a mission—to raise knowledge of robotics and engineering in Israel and internationally. Even though we compete, we help other teams so everyone gets better. I learned I like to help other people.

This team has changed my perspective on life. I went through a bad time and failed my classes one year. This program helped me believe in myself again. The year after I started the team, I got all As.

Next step for Maya: "I hope in the army I'll do what I'm doing here...then I want to continue with robotics."

Or Zoi Solomony, Odyssey Program

Seventeen-year-old Or Zoi (whose name combines Greek and Hebrew to mean "the light in life") had no interest in science until two older students came to her class when she was 14 and talked about Odyssey. The program gives high-achieving ninth- to 12th-graders courses in the sciences as well as in math, computer science, cyber security, and mechanical engineering.

Every Thursday I come to BGU, from 10:00 a.m. to 7:00 p.m. Last year we also worked in a lab for four hours on another day to study what we learned in class about red blood cells. When you see with your own eyes the phases of mitosis and do the tasks, it's very different from everything else.

The social part of the program is amazing! We take trips and do volunteer work in the community. I made new friends—they're my best friends now. In between things I try to catch up with younger

students and see how they're doing and help them get used to this level of academic learning and the environment.

Since I started, my grades are even better. I learned to arrange my time and can understand and learn things faster. I learned to work in a team, which isn't easy, and talk in front of people. The great opportunity is to find out what really interests you and develop who you really are. It has made me more mature and independent, and makes me believe that I can learn complicated things and do great things. You can be more open to people and you know how to express yourself better. It actually makes you a better person.

Next step for Or Zoi: "I've been accepted to the army's radio department. I also applied to work in an intelligence unit but haven't heard yet. Science is a top choice for my university studies later; it's my passion—but I definitely won't give up writing and art!"



Additional Jusidman Center Programs

MARIE CURIE is a three-year program that starts in 10th grade and teaches college-level chemistry.

DaVINCI gives seventh- to ninth-graders a taste of disciplines ranging from physics to astronomy, medicine, economics, architecture, psychology, and logic.

MEITAR brings 90 select participants, ages 16 to 18, to BGU for weekly classes with senior researchers from the Department of Mechanical Engineering and engages them in team research projects.

SCIENCE DAYS are designed to expose high schoolers to lectures and lab time, summer camp programs and team competition. This program produced the leading physics team in the Israel Olympics, and last year, the team came in eighth against teams from all over the world.

SOLVING MEDICAL CHALLENGES THROUGH UNCONVENTIONAL TEAMS

Continued from page 22

A tool for such treatment called the BaMPer system (Balance, Measure and Perturbation System) was developed at BGU by the Departments of Physical Therapy and Mechanical Engineering. Already commercialized, it is a special treadmill that exposes users to small unexpected perturbations that gradually intensify as they walk. "We use this training regime to teach the elderly and stroke patients how to react to unanticipated changes and improve their ability to avoid falling," Melzer says. Hub researchers are further extending this technology.

The group hopes to shorten the lengthy

gap between research and the practice of physical therapy. Recently, at the recommendation of physical therapy students, the hub organized a broad-based conference framed as the First International School of Active Aging. In addition to leading international researchers, BGU students, researchers and Israeli physical therapists from outside BGU participated. "It exposed our students to specialists from all over the world and introduced these people to our labs, to BGU and to Israel," Melzer says. "We learned a lot from the presenters and expect to see future collaborations. We also hope to go on

with this three-day school every year."

The hub has already changed Melzer's own perspective. "With my background as a physical therapist, my research was narrower. I looked for physical treatments to improve gait and balance. Now I want to know about brain function and how it's involved—which areas relate to balance, how the brain is wired, how the brain areas relate to each other. And I can talk with engineers about how to develop and improve the technology.

"And who knows, maybe a special drug for those damaged brain areas can be designed to help people improve their balance." ■



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THREE DAYS OF NEGEV IN NYC

OCTOBER 27 TO 29, 2019

INTERCONTINENTAL NEW YORK TIMES SQUARE
300 WEST 44TH STREET

SUNDAY, OCTOBER 27

11:30 A.M.

2019 Tax Planning Seminar
with lunch

1:00 P.M. - 4:00 P.M.

BGU Symposium: "Breaking the
Barriers in Brain Science"

6:30 P.M.

Dinner Party Honoring
Outgoing BGU Chairman
Alex Goren
Mandarin Oriental Hotel

MONDAY, OCTOBER 28

8:30 A.M.

Breakfast and Opening Plenary

10:00 A.M. - 1:30 P.M.

AABGU National Board Meeting
with lunch

1:45 - 5:00 P.M.

AABGU Committees

8:00 P.M.

Zin Fellows Reunion
(By invitation only)

TUESDAY, OCTOBER 29

8:30 A.M. - 12:15 P.M.

Breakfast and AABGU Committees

Departure

**COME FOR ONE, TWO
OR THREE DAYS**

For details and early registration, visit
www.aabgu.org/2019-annual-meeting
Or contact experiences@aabgu.org
or 646-452-3711