

IMPACT



AMERICAN ASSOCIATES
Ben-Gurion University
of the Negev

SPRING 2012

DESERT FISH

**TOMORROW'S
SOCIAL WORKERS**

**THE SCIENCE OF
PSYCHOLOGY**

**PUTTING THE PRACTICE
IN MEDICINE**

**BRIDGING DISCIPLINES TO
STUDY ISRAELI SOCIETY**

INNOVATION + CHUTZPAH = BGU

BY ALEXANDER M. GOREN
AABGU PRESIDENT



In recent *Impact* issues we have focused on BGU's fascinating new research under way in many sciences. In this edition you'll read about extraordinary frontiers that are opening up in other disciplines.

Psychology, for example, is assuming entirely different dimensions today. With sophisticated tools to watch the brain at work, many psychologists have become data-driven researchers. Behavior is no longer seen as a separate field of study, but one that is closely aligned with science and medicine.

And students in the University's thriving social work department are learning to become community leaders who are taking responsibility for creating a better world and for helping those they work with become activists on their own behalf.

Then there's farming. Many BGU departments are engaged in desert agriculture. But did you know that some of the new farms raise fish? Thanks to a combination of research, ingenuity and Israeli *chutzpah*, BGU is forging a fishing industry that is viable in arid lands and may help solve worldwide food shortages.

We take miraculous medical breakthroughs almost for granted these days. But how can we train new doctors when so much information needs to be mastered, along with clinical expertise?

The use of medical simulation mannequins is giving students the chance to learn their craft and practice it in a safe environment. The Field Family Foundation Medical Simulation Center, taking shape right now, is a great example of how new technology is supplementing traditional methods.

Finally, don't miss the feature story on Dr. Yaakov Garb. He epitomizes a new kind of valuable specialist, or more accurately, cross-specialist—he is an “interdisciplinary” able to combine knowledge from many fields to solve complex societal problems.

You will find that a common theme in all these articles, as in past issues, is the complete and total commitment to community service and to the Negev development mission. It is this component that continues to make BGU unique among universities.

IN THIS ISSUE

News Briefs	3
Donor Impact.....	6
Lawrence N. Field: It's "Not So Bad"	
Efraim Margolin: Building a Nation	
Toby and Morton Mower: Finding Affinities at BGU	
Education and Research	9
Desert Fishing: How BGU Helps Build a Negev Industry	
Social Workers Learn to Change the Status Quo	
The Science Behind Today's Psychology	
Changing the Medical Education Model with Simulation	
Master of Many Trades Takes the <i>Really</i> Broad View	
First Person: Why I Choose to Teach at BGU	20
Regional News	23
Student Profile: Shir Mnuchin and the Gift of Community	30

ON THE COVER: BGU scientists are helping farmers grow ornamental fish in the Negev Desert using the natural warm and slightly saline water found underground. Photo: Ronni Strongin

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Photo: Rick Mastandrea

AABGU LAUNCHES ZIN FELLOWS LEADERSHIP DEVELOPMENT PROGRAM

FIFTEEN YOUNG LEADERS have been selected to participate in the Zin Fellows Leadership Development Program of American Associates, Ben-Gurion University of the Negev (AABGU). Applicants were nominated by AABGU supporters and friends and will participate in three major seminars over the course of two years. The first three-day seminar took place in February in Florida. The inaugural class culminates its program next year in Israel.

This exclusive innovative program is designed to create a community of “next generation leaders” committed to furthering David Ben-Gurion’s vision for Israel’s Negev region. Zin Fellows experience in-depth immersion into issues relevant to the Negev and its development.

“Our goal is to provide insight into the challenges that lie ahead for Israel’s expansive desert region. Zin Fellows will gain a unique appreciation for both the obstacles and opportunities that lie before us,” explains Doron Krakow, executive vice president of AABGU. “Utilizing the University’s extraordinary resources, the program will provide each fellow with a special appreciation for the Negev and, we expect, a determination to play a part in its development.”

The program’s lead faculty members are Dr. Paula Kabalo of the Ben-Gurion Research Institute for the Study of Israel and Zionism and Prof. Isaac (Sakis) Meir of the Jacob Blaustein Institutes for Desert Research. Several other distinguished BGU faculty and guests will also contribute to the program. Topics

“Our goal is to provide insight into the challenges that lie ahead for Israel’s expansive desert region.”

— DORON KRAKOW

will encompass the Negev as a crossroads of history and ecology, religion and technology, desert research and sustainable development, and indigenous populations in transition.

The Zin Fellows Leadership Development Program is being generously supported by Co-chairs Wayne Woodman and Lisa Scheller of Allentown, Pennsylvania, participants in the inaugural class themselves, as well as other donors from across the country. Wayne is vice president



The Zin Canyon in Sede Boqer

at GKM Advisers, LLC and an investment management consultant. He is also a vice president on AABGU’s national board.

Lisa Scheller is president of her family’s manufacturing business, Silberline Mfg. Co., headquartered in Tamaqua, Pennsylvania. She is the elected Lehigh county commissioner. Lisa and Wayne are married and have six children.

“While monetary donations are critical for the growth and development of the University, Lisa and I conceived the Zin Fellows program to cultivate a younger, future donor base,” Wayne explains. “This innovative, self-sustaining program will also create a highly knowledgeable group of ‘Negev Ambassadors’ who will truly understand and effectively communicate the region’s importance to the future of Israel.”

The name Zin is derived from the biblical Wilderness of Zin. The Desert of Zin is a geographic area mentioned in the Torah as a place where the Israelites wandered and Moses drew water from a rock. David Ben-Gurion chose to live near and be buried on the edge of a cliff overlooking the vast Zin Canyon. BGU’s Sede Boqer Campus, home to the program’s lead faculty, also overlooks the canyon. ■

THE BGU ENERGY INITIATIVE: LEADING THE NATION IN ALTERNATIVE FUELS

THE BGU ENERGY INITIATIVE is bringing together multidisciplinary groups in emerging fields of energy research and development (R&D) that incorporate basic scientific theory

and applied systems technologies. The groups encompass 35 researchers from Ben-Gurion University who focus on five areas: alternative and renewable fuels, solar energy, fuel

cells, energy efficiency, and energy economics. The faculty members are in the vanguard of Israel's research community, working on a national level to create strategies for developing alternative and renewable energy sources.

"Ben-Gurion University of the Negev has been at the forefront of energy research for more than 30 years with an emphasis on the development of novel concepts and

applications," says Prof. Moti Herskowitz, vice president and dean for research and development.

Additionally, BGU is a leading member of the Israeli Center for Research Excellence in the field of renewable liquid fuels, and works with industry leaders to find cost-effective solutions to secure Israel's future energy sources.

Prof. Herskowitz guides the BGU Energy Initiative and is responsible for promoting and facilitating all aspects of fundamental and applied aspects of R&D, including the diverse infrastructure, marketing and management. Herskowitz was also recently appointed to head the nation's Committee on Energy R&D, which is part of the Israel National Council for R&D.

Herskowitz holds the Israel Cohen Chair in Chemical Engineering and is a researcher in the fields of advanced materials, catalysis and liquid fuels. He established and became the director of BGU's Blechner Center for Industrial Catalysis and Process Development in 1995. ■

To learn more about this initiative, go to: www.bgu.ac.il/energy



ZenithSolar purchased technology from BGU to make these solar panels that are now powering a kibbutz near Tel Aviv.

AABGU LOSES A GREAT FRIEND AND THE JEWISH COMMUNITY LOSES A GREAT PHILANTHROPIST

ERIC ROSS, AABGU national board member and very special friend, passed away last summer. His talents as an entrepreneur and pioneer in the plastics industry were matched only by his dedication and generosity as a philanthropist.

Together with his late wife Lore, Eric devoted the last decades of his life to preserving the memory of those lost in the Holocaust and to the education of the next generation. Upon his death, \$17.4 million from his estate was donated to AABGU on behalf of Ben-Gurion University of the Negev on top of the millions

he already contributed, placing Eric and Lore Ross among the largest contributors in our history.

In recent years, Eric and Lore made frequent gifts to BGU. They supported numerous University programs, including scholarships for students in need, capital projects, as well as community service programs for disadvantaged residents of the Negev region. As an outgrowth of their deep personal relationship with University President Prof. Rivka Carmi, they also made numerous contributions to the President's Discretionary Fund.

Continued on next page

Photo: Carl Cox



Eric led a remarkable life. With only an 8th grade education, he fled Nazi Germany in 1938 with \$10 in his pocket and arrived in New York on what is now infamously known as Kristallnacht. His parents perished in Auschwitz.

When America entered the war, Eric joined the U.S. Army, and earned his lieutenant bars on the Western front and a Bronze Star for meritorious service. It was in New York where he met and married Lore, a friend from Frankfurt who also was fortunate enough to escape. The two settled in West Orange, New Jersey where they raised their children.

Eric created what became an extremely successful business, manufacturing plastics and vinyl products for the flooring industry, as well as compounds for the medical industry. He later sold the company and began his second career as a philanthropist.

He gave away much of his fortune during his lifetime, determined to contribute to the greater Jewish community. Along the way, education became his philanthropic passion. Over the course of their lives, the Ross's donated approximately \$250 million to a variety of causes.

When Eric was awarded a prestigious honorary doctoral degree from BGU in June 2010, he said, "What does this honorary doctorate mean to me? Well, considering that I never went to college and was forced out of school in 1933 at the age of 14, and have now received the University's highest honor, I have not yet digested it."

His mark was great and our loss is even greater. He will be sorely missed. May his family be comforted among the mourners of Zion and Jerusalem. ■

Photo at left: Eric Ross received an honorary doctoral degree from BGU in June 2010.

OUT OF THE DESERT CAME A NEW GENERATION

BY DORON KRAKOW
EXECUTIVE VICE PRESIDENT

THE LAST WEEK of February marked the first gathering of the inaugural class of the Zin Fellows. The 15 fellows were hand-picked from across the country based on their combination of talents, leadership potential, intellectual curiosity, and commitment to the future of Israel. They are between the ages of 35 and 50 and yet already occupy major leadership positions in both their professional and volunteer lives.

The name Zin comes from the desert wilderness just south of Sede Boqer, David Ben-Gurion's desert home. The Torah tells us that the children of Israel passed through this wilderness near the end of their 40 years of wandering following the exodus from Egypt. It was the pathway from which they emerged with a new generation of leaders determined to rebuild a country and a nation.

It is no coincidence that it is our University that bears Ben-Gurion's name. He was a visionary. And he understood long before the final borders of the country would be determined by both diplomacy and war that Israel's future would depend upon the Negev and the nation's ability to conquer it—not by means of guns but through dogged determination, through sweat, toil and an unstinting commitment to making this desert hospitable for the long-term development of Israeli society.

Jewish settlement had been absent from the Negev for nearly 4,000 years when the young pioneers began to return in the 1930s and 1940s. Absent, but not forgotten.

And so the work began. And Ben-Gurion's commitment to the success of this grand endeavor included not only the resources he

commanded as the head of the *Yishuv* (Jewish community in Palestine prior to the establishment of the State) and later the government of the new State, but also his influence on Israel's pioneers and, more importantly, their children. And he led by example, choosing in 1953 to join a handful of young veterans of the Independence War, who chose Sede Boqer to establish a new agricultural settlement. There he worked the fields, tended the animals and hosted Israel's political leaders, as well as those from around the world.

In the introduction to a 1961 book on the history of the Negev he wrote that "The transformation of the Negev into a center of agriculture, industry, mining, commerce, learning, and research, and as a bridge of trade and political ties between the continents of Africa, Asia and Europe, is the central pioneer task of this generation of Israel and of world Jewry..."

Much has been accomplished. Much more remains to be done. We welcome the Zin Fellows into this grand national enterprise and eagerly look forward to the impact they will have on the course of its progress.

When we celebrated Pesach this year we were reminded once more of how the exodus began. Let us also remember how it ended—emerging from the Wilderness of Zin with a renewed leadership and a steadfast commitment to the building of the national homeland for the Jewish people.

L'shana baba'ah b'Yerushalayim—Next year in Jerusalem. ■



LARRY FIELD has a favorite saying: “The only way to keep a bird is to open your hand.”

The idea guides his approach to business, philanthropy and life in general. “I always give to worthy causes. And as I prospered I found the more I gave, the more it came back to me,” he says.

The worthy causes include education, hospitals, arts organizations, and “anything that helps the state of Israel. BGU was an early favorite because I felt the Negev was the only place Israel could expand—which it has.”

The University came to his attention about 30 years ago when a persistent AABGU leader visited him and convinced him not only to make a contribution,

but also to join the board. He later served as national vice president and on BGU's international board of governors.

He continues his generous support. “I see BGU growing in many of the right directions,” he notes.

Larry was honored by AABGU at a gala dinner in September 2011, and in January, his generous pledge to help build the Field Family Foundation Medical Simulation Center (see story on page 19) was announced. “I believe this is very important, a breakthrough in medicine,” Larry says.

Larry began his career in real estate shortly after earning his degree from Baruch College in New York. After operating a successful brokerage in the city for six years, he relocated to Los Angeles, where he managed major properties for companies that include Loews Corporation and Harry Helmsley.

In the mid-1970s he co-founded The Richlar Partnership, which proceeded to develop over one million square feet of commercial and industrial property in the Los Angeles area, and built more than 800 single-family homes. But in 1980, the partners split up, and Larry could no longer use the name, which he had invented.

His late wife Eris suggested the name: Not So Bad. “It’s what I say when anyone asks how I’m doing, or about my business—I say it so often that if I ever stopped, people would ask me what’s the matter. Eris told me to use the initials. I thought people would find that strange. But she pointed out that ABC and CBS did okay.”

NSB Associates did okay too. The company develops, invests in and manages commercial properties in



LAWRENCE N. FIELD
LOS ANGELES, CALIFORNIA

GIVING: IT’S “NOT SO BAD”

Southern California. It owns more than 2.5 million square feet of commercial space on more than four million square feet of land.

Larry attributes his success to the classic virtues of character, integrity and honesty. He has also practiced some farsighted business principles. One idea came from meeting with the chairman of a real estate company in London.

“I asked if he owned any buildings. He told me their buildings never change hands—they keep them for 500 to 800 years and give 99-year leases! I thought to myself that this is not so different from old families never selling their buildings. So I adopted the idea and keep everything. It makes me look like a genius.”

Though still very active in NSB, Larry now gives increasing time to his philanthropic activities. He is a member of the board of directors of

Cedars-Sinai Medical Center, and has donated major gifts to fund

diabetes and memory disorders research. He is also a board member of the Los Angeles Music Center, the Los Angeles Philharmonic Association and the Young Musician’s Foundation, which recently honored him for his support.

Larry especially believes in supporting organizations that do not receive government funding. A decade ago, he established the Lawrence N. Field Center for Entrepreneurship at his alma mater, Baruch, a public college. He also funds programs that help disadvantaged young people develop entrepreneurial skills and succeed in their education.

As the son of poor immigrants who struggled to give him his own education, Larry says, “I want to help the next generation of entrepreneurs understand that they too are limited only by their ambition and hard work.”

He remains convinced that giving money away is the surest route to success.

“I have many wealthy friends and I’m amazed at how little some of them give. I tell them enjoy it! Give it away! Do things that will help other people!”

“Some have listened and got involved in giving a lot. They prospered from doing it. I know it works. As long as you keep going, you’ll come out successful.”

“That’s my own homegrown philosophy.”

And from any viewpoint, it’s not so bad. ■

EFRAIM MARGOLIN remembers when to be in Israel was to be a *halutz*—a pioneer who immigrated to Israel when “building the land and working it was the only thing. You had to change your way of life, forget what you had been, and build a country.”

His father brought his family out of Russia in 1921, when Efraim was one-year old, to escape the pogroms. Though a bookkeeper by profession, his father worked on the new road from Jerusalem to Tel Aviv, finding a cleaning job at Keren Kayemet LeYisrael and retired 40 years later as a controller.

Loving mechanics from his earliest years, a 14-year-old Efraim convinced his father to send him to study in Haifa at Israel’s first technical high school, Bosmat.

“I loved it,” Efraim recalls, “even living in one room with three other students and always being hungry because the landlady didn’t want to spend money on food for us.”

After finishing school, the new graduate was shocked to find no jobs. More education was the answer, he decided. He found the British Institute of Engineering correspondence school, learned English to take the course, and seven hard years later earned an engineering degree.

A job repairing British army trucks led quickly to a foreman’s role, and then to what he was told was “a very important job for Israel—in Iran.” For two years he worked profitably for the Persian Oil Company, and was then recruited to Bahrain to build the airport.

Efraim wanted more education. The construction company he worked for obligingly sent him to Columbia University for an industrial engineering degree.

“I met Florence. I fell in love and was having a wonderful time in New York,” Efraim recounts, “and then it was 1948 and the war [for Israel’s independence] started. Israel recruited me, but not to come home—to stay in the U.S. and buy guns and armor secretly.”

Then there was a steamship to rehabilitate and sail to Israel. Loath to leave Florence, Efraim proposed.

The young couple settled in Israel, and they were there in 1949 when David Ben-Gurion announced that Israel’s future was in the Negev and Beer-Sheva was destined to be the largest city in Israel. Efraim was asked to help build the city-to-be. He and Florence went to see Beer-Sheva.

The verdict: “There’s nothing here! Nobody! One little store, no houses, maybe 200 people. Only a few Israelis wanted to go there!”

But the Margolins went. As manager of the building



EFRAIM MARGOLIN
NEW YORK, NY

BUILDING A NATION

program, Efraim brought in equipment and 20 immigrants and began putting up concrete houses. After a year and a half of this work, Ben-Gurion came and decried: “I don’t want that kind of city! I don’t want those concrete boxes! I want houses with red shingled roofs!”

“So we stopped,” Efraim says.

Florence was pregnant and ill at the time, so the Margolins decided to return temporarily to the U.S. “A strange place, no money, I went from being big chief to practically starving.”

But Efraim pulled off a low-paying job as a draftsman, and then a plush position buying equipment for Technion’s new Mt. Carmel campus. Seven years later, he took a chance and launched his own business. It failed.

Job-hunting once again, he noticed how inefficient—but lucrative—the placement industry appeared to be. He talked his way into an agency placement position and specialized in engineers, soon becoming fabulously successful because “I *was* an engineer!”

Efraim opened his own very successful agency, then added a marketing and import company. Financial security was achieved.

In 1984 the Margolins went to visit the new Beer-Sheva and the new university growing alongside. They were amazed.

“In 1950 we had to pump water from Beer-Sheva’s one well to fill the tanks on the roofs; we thought it might have been Abraham’s well—and we were drinking the same water he drank. History repeats itself. Coming back to Beer-Sheva and building it up is very important to Jewish history.”

One of Efraim’s few regrets is that he and his wife didn’t stay to build the city and university—which, ironically, took beautiful form in concrete. So he is generously willing a legacy to AABGU, and another to the City of Beer-Sheva that will build a traffic circle with a water fountain to bear his and Florence’s names.

Now 91, Efraim continues to run a set of businesses that include jewelry, personnel, recruitment, and mergers and acquisitions in the jewelry industry. He is just starting a new call center business. “I like working,” he says.

Two years ago he finished writing a book about his life, *Building Dreams: My Heart Belongs to Israel* (www.efraimmargolin.com). And if you want to reach Efraim, he’s on Facebook and Twitter.

What about those concrete houses in Beer-Sheva that Ben-Gurion despised? “Oh, they’re there forever—people added terraces and such. They’ll be there 1,000 years.” ■

A DOZEN YEARS AGO, Toby and Morton Mower were invited to an AABGU parlor meeting. They had a houseguest—a young Israeli woman they had met on a trip to Israel—who noticed the invitation and asked, “Who do you know at BGU?” “No one!” the Mowers replied. That was to change quickly.

Their guest, Michal Cooperberg, was a BGU graduate doing a physiotherapy internship in Baltimore. She accompanied the Mowers to the meeting and inspired the whole group with her passion and enthusiasm for the University.

“On our next trip to Israel,” Toby recounts, “we went to see what BGU was like, and fell in love. I was very, very impressed, especially when we went to the cafeteria to eat and saw everyone mixed together at one table, regardless of race, religion or color. I had never seen this at any other university in Israel before.”

Mort recalls, “I found it very warm. We took the tour. We met Avishay [former BGU President Braverman]. That’s how we got involved.”

Mort is a world-renowned cardiologist who co-invented the implantable cardiac defibrillator, and is currently working on a new kind of pacemaker with major medical potential. Toby was a nurse for many years, taught coronary care nursing, and then earned an M.S. in clinical psychology with a major in addictions therapy. Naturally, both were interested in BGU’s medical programs. Mort liked the humanistic approach taught in the medical school, and was pleased with the up-to-date nature of the cardiac program.

The couple made a generous gift to fund scholarships for nursing and high-tech students, and soon after established a Chair in Shock Wave Studies.

Among other programs, the Mowers also funded the Toby Mower Nursing Skills Laboratory and the Perach Program, which connects university students with thousands of the region’s disadvantaged children who need tutoring and mentoring.

Mort and Toby have participated in several Board of Governors meetings. They are members of the Ben-Gurion Society, and their names are engraved on the 40th Anniversary Obelisk, in recognition of their continued generosity. In 2010, Toby received an honorary doctorate from BGU.

Recently, Toby talked to President Rivka Carmi about her strong professional and personal commitment: battling addiction. Among her many charitable endeavors, Toby



TOBY AND MORTON MOWER
BALTIMORE, MARYLAND

FINDING AFFINITIES AT BGU

is the founder of a long-term recovery facility for Jewish addicts in Baltimore called Jewish Recovery Houses.

Toby found an enthusiastic response from Prof. Carmi. The outcome: the Mowers provided funding to develop the Toby Mower Curriculum for the Prevention and Treatment of Addiction that includes naming a professorial chair. The program will be coordinated through the Nursing Department of the Leon and Mathilde Recanati School for Community Health Professionals and will be open to all students within the Faculty of Health Sciences. Toby will share her expertise as the program develops, and this engagement is a characteristic she values in BGU. “I just love working with the people there. The BGU

approach to philanthropists is very satisfying—their response, their attitude, their interest in my input. We work with some organizations that we never

hear from unless we’re giving money.”

Mort concurs. He enjoys receiving letters from BGU scholarship students, often something other universities do not provide, he says.

Mort and Toby also share a strong conviction on the importance of giving.

“You’ve got to do something worthwhile in life,” Mort says. “Our favorite expression is, ‘to keep it you’ve got to give it away,’ which can be taken on several different levels.”

Mort recalls that his mother was always charitable, even if she had only a nickel or quarter to contribute. “It wasn’t charity on a grand scale but it was persistent and taught me that everyone can give.”

Approximately three years ago, Mort became chair of the Parson’s Water Fund, a Jewish National Fund program that is working to increase water quality and quantity in Israel and is building the Beer-Sheva River Park.

Toby, who finds time for leadership roles in many Jewish charities in the U.S. and Israel, says, “When people admire my philanthropic work, my answer is, ‘you can do it too.’ Everybody doesn’t have a lot of money, but you can give at your own level.”

Mort notes that he has an additional reason to feel that supporting BGU matters. “It’s a linchpin of the Negev, with 60 percent of the country’s land and 8 percent of the population. So if we are ever going to stabilize things in the Middle East, we must build up the Negev. It’s why I help.” ■



DESERT FISHING: HOW BGU HELPS BUILD A NEGEV INDUSTRY

WHEN THE IDEA of fish farming in the desert came up about 25 years ago, it sounded like a joke, recalls Prof. Samuel Appelbaum, who heads the Bengis Center for Desert Aquaculture at the Jacob Blaustein Institutes for Desert Research (BIDR). “We were the first to realize that the brackish water beneath the desert could be used for agriculture, aquaculture and a combination of the two,” he recounts.

During the past few decades, Appelbaum and his BGU colleagues have pioneered the farming of fish, shrimp and crustaceans in the Negev alongside horticulture specialists developing agricultural crops. The results draw increasing attention from the rest of the world as more drylands materialize and the threat of world hunger rises. Similar farming techniques are now used in arid lands as far flung as Arizona, India and Australia.

Top photo: Ornamental fish are raised at the Negev farm Colors, where Dr. Leibowitz oversees research on fish health. Courtesy Ran Epsteen, company owner.

In the Negev, the process builds on the fact that 50 to 100 feet below the desert surface lies ancient water with a temperature of 104 degrees Fahrenheit and a slight salinity, less

“...aquaculture is so intensive that you see what you would in nature, but much more.”

— DR. DINA ZILBERG

than 10 percent the salt of seawater. “It percolated down thousands of years ago when it was more rainy than now,” Appelbaum explains. The less rain the region experiences, the more treasured this once-hidden reservoir becomes.

With some trial and error over the years it was proved that this naturally warm water, pumped into closed systems, provides an excellent environment for certain fish and other water dwellers, including sea bass, tilapia, bream, barramundi, catfish, guppies, clown fish and more.

The fish excrete metabolites, highly nutritious to plants, into the water, which once adjusted to specific needs, can be re-circulated to grow agricultural products. Continuing the cycle, the plants absorb the metabolites through their roots and clean up the water, which is then recycled back into the fish ponds or pools.

“This water is much cheaper than fresh water in Israel and it’s available throughout the year independent of weather conditions,” Appelbaum observes. “It’s free of pollutants—there was no industry when it hit the ground—and we don’t have to pay to warm it.” The subsurface water is not, however, a renewable source: used carefully, it will last for perhaps 50 years, Appelbaum estimates, by which time he believes desalination techniques will solve the water challenge.

ACADEMIA GOES FISHING

The Negev fish farms were developed through close collaboration between BGU scientists and local entrepreneurs, and University researchers continue to

Continued on next page

serve as consultants and troubleshooters to the local industry. Over time, some farms that raise fish for the dinner table have given way to the growing of ornamental fish for the aquarium, and new fish farms growing tropical species have been established.



Photo: Ronni Strongin

Dr. Dina Zilberg at Of Hachol ornamental fish and parrot farm

Farmers have found it difficult to compete with other parts of the world growing edible fish and even other parts of Israel, where production costs are cheaper.

“The infrastructure costs for ornamental fish don’t have to be so high,” explains Dr. Dina Zilberg, a fish research specialist and senior lecturer at BIDR’s French Associates Institute for Agriculture and Biotechnology of Drylands. “The ornamental industry is high-tech and more profitable.”

Pet fish find a ready market in Europe. Although the Israeli-raised aquarium fish are more expensive than those from competing suppliers—mainly based in Singapore—they are valued for their health and resistance to disease. This is the province of Dr. Zilberg, who combines her own research on parasites and infectious disease with support for farmers when their fish have problems.

The research focuses on creating ideal conditions for fish, she explains, and keeping them healthy. Because the environment is closely controlled, the fish farms provide unusual laboratories for studying problems. “I’m pretty sure that everything comes up

in nature—diseases are always there, but we may not see them,” Zilberg says. “When viruses arise in the natural environment sick fish can easily be missed and often are preyed upon. But aquaculture is so intensive that you see what you would in nature, but much more.”

For example, responding to a fish farm problem, Zilberg recently studied a protozoan parasite that becomes systemic in guppies and may serve as a model for other, similar parasitic infections. In researching its interaction with the host, she found a treatment for the disease. Longer range, she hopes to develop an oral vaccine. Another ongoing project involves using microalgae to stimulate the fish’s own immune system. And recently, she has been investigating unusual tumor-like lesions in clownfish, never before reported.

HOW BASIC RESEARCH HELPS

Dr. Marcia Pimenta Leibowitz is a fish health specialist who earned her M.S. and Ph.D. at BGU, working with Zilberg. With experience managing aquaculture for a government lab as

“We need biosecure fish in the future—fish that are resistant to pathogens. You can only get this through research.”

— DR. MARCIA PIMENTA LEIBOWITZ

well as private research facilities, she is now responsible for fish health at Colors, an area company that grows tropical fish, shrimp, koi and other organisms for aquariums.

She notes that the University’s basic science resources are instrumental to

the industry’s development.

Prof. Sammy Boussiba, director of the French Associates Institute, for example, who has no direct interest in fish farming, provided a specific algae that is critical to the lifecycle of some shrimp and fish. “Without that we couldn’t grow many of these creatures,” she says.

Plant specialist Dr. Rivka Ofir, of the Faculty of Health Sciences’ Department of Virology and Developmental Genetics, shares her library of plant extracts. Their medicinal properties can be used to treat fish disease. And, the farming can inspire important research that might otherwise not happen—Prof. Amir Sagi’s work with crustaceans and calcium, for example (see sidebar on next page).

Leibowitz continues to collaborate with BGU researchers as well as those at other Israeli and American universities. Israel is the right place to be, she believes, because, “It’s always up to the challenge, very driven to do the next best thing, especially in aquaculture. BGU is cutting edge because it’s newer and growing. But there’s still a lot to do. BGU has a huge role.”

Like Zilberg, she appreciates the research opportunities the farms offer. “All over the world fish grow in nature. In Israel, we grow them in greenhouses—so we have much more data: such as how many fish die, how much food they need based on body weight.” She is currently exploring how to produce specific pathogen-free goldfish in closed biosecure systems all year round. Traditionally, goldfish are reared worldwide in open ponds where they only breed seasonally.

Fish grown in closed systems where conditions are controlled are healthier, she says. “If you give them high quality food and a good environment and the husbandry is OK, they will not get sick. You use the least chemicals you can.”

And for the future, the importance of expertise in fish farming can only grow. “How long can you keep taking fish and shrimp from the wild?”



Photo: Ronni Strongin

Kibbutz Mashabei Sade, slightly north of Sede Boqer, raises Australian sea bass in multiple fish ponds. Up to 500,000 cubic meters of pond water is recycled for irrigation every year.



Photo: Ronni Strongin

This system used at Of Hachol cleans and recycles all the water in each fish pool every hour.

Leibowitz asks. We need also to ensure that fish are healthy to eat. “We need biosecure fish in the future—fish that are resistant to pathogens. You can only get this through research.”

Appelbaum also sees a big role for fish farming in the Negev and other arid lands: “The gap between availability of fish from the ocean and the

increasing demand globally can be breached by aquaculture. It’s not a revolution—simply sensible utilization of resources. As pioneers we can show others how to do it. Students come to our school for desert studies from less developed countries all over the world to study everything about arid lands, including fish farming. We expect them to return to their homelands

and benefit from our investment.”

He champions a major shift in thinking: “We’ve been seeing all the arid lands around the world as useless and infertile, and poverty is the result. We have to forget that and see the opportunities—opportunities like the subsurface water that is often there and can be used to feed the nations.” ■

OUT OF THE BOX RESEARCH LEADS TO NEW BUSINESS

BGU’S PROF. AMIR SAGI, an internationally known endocrinologist from the Department of Life Sciences, has long investigated crustacean reproduction and hormones, most recently on the DNA, gene and gene expression levels. Working on crustacean aquaculture in the Arava region, he found a project idea growing way beyond the initial research.

How, he wondered, do crayfish accomplish the extraordinary feat of building a new, bigger skeleton in only three or four days? “They must calcify their entire skeleton in that short time. We studied their solution: storing a pellet in their stomachs, a gastrolith, which is dissolved when they molt. The process inspired us to make calcium similarly available for human consumption, both from natural resources or synthesis in the lab.”



Prof. Amir Sagi, Lily and Sidney Oelbaum Chair in Applied Biochemistry

In collaboration with Dr. Amir Berman of the Avram and Stella Goldstein-Goren Department of Biotechnology Engineering, Sagi succeeded in stabilizing a rare form of calcium carbonate that is more easily absorbed by the human body, and may alleviate calcium deficiency and accelerate bone injury repair. The research has earned four patents, and Sagi co-founded a BGU-based startup company called Amorphical to develop new products. The business has drawn \$3 million in investment so far.

Sagi hopes to have the first product on the market this year. He sees a potential to revolutionize the additive/supplement market, and is researching pharmaceutical possibilities.

“The future for Israel is in special products like this—niche high-income products,” he believes. “We cannot compete with countries that have unlimited water, cheap space and cheap manpower. But we can do very well with niche specialty markets.”

SOCIAL WORKERS LEARN TO CHANGE THE STATUS QUO

BEN-GURION UNIVERSITY'S twin commitment to academic study and community action is not just an idea. For the Charlotte B. and Jack J. Spitzer Department of Social Work, it's a code of ethics, says its chairperson Prof. Julia Mirsky. "We do live up to it. Of all the social work departments in Israel we're considered the most active and involved in the community," she says.

The department fulfills a mission set for it in 1982, when it was established in response to the social

"We consider it a moral imperative for them to be aware of social justice issues and promote them in legislation and policy."

Thus, students on all levels may be found empowering the residents of impoverished neighborhoods to speak for themselves, disseminating information on the rights of marginal populations, meeting with local officials, or lobbying the Knesset. For example, for a class explicitly devoted to social change, the final project is to plan and execute a program to convince the

fight for their rights. We teach our students that knowledge is power, and encourage them to seek it."

BRINGING THE FIELD TO THE CLASSROOM

The program also teaches aspiring social workers to be critical thinkers. "There's a lot of active, participatory learning," Mirsky says, "not just sitting and listening to someone more knowledgeable. You go out in the field and find out for yourself and then we'll help you think about it. We'll give you books—but we believe in experiential learning. Otherwise it's detached from reality."

In practice, each teacher has a personal focus, or "obsession," as Mirsky puts it, and integrates learning and experience in different ways. Her own specialization is the mental health aspect of immigration and the transmission of knowledge across cultures.

"We'll do a project to understand the experience of immigration, what people go through. But it's much more challenging to move beyond the research. Students go out and interview immigrants, come back to class and discuss what they found, read the literature, then write papers."

Prof. Richard Isralowitz specializes in research on substance abuse, and directs the Center for Regional Alcohol and Drug Abuse Resources (RADAR). He's particularly engaged with researching high-risk youth, "kids falling through the cracks who tend to drift toward substance abuse. Students can immerse themselves in the whole research spectrum," he says.

Students are trained in focus group techniques, then go out and discuss substance abuse problems with high-risk youth in the high schools and bring back data. Ultimately, the results provide a blueprint for service



BGU social work students raise awareness about hunger in Israel.

welfare needs of the highly diverse Negev population that includes some of Israel's poorest people.

The approach is pluralistic. Students are solidly grounded in the field's theory, but are encouraged to work—and think—outside the academic box. "Our students spend half their time in the field, providing social and welfare services, and also in community development and social change efforts," Prof. Mirsky says.

national legislature to amend a law.

Projects that are likely to succeed are chosen, Mirsky says. "We want them to graduate with the feeling that things can be changed, and that social workers are responsible for *doing*." The story about giving a man a fish to eat versus teaching him to fish resonates for social workers, she says. "The easier way is to give people what they need or lack. It's more difficult to teach them and help them

providers and policy makers, as well as a guide to training staff on best treatment and prevention.

Some 10 years ago, Prof. Vered Slonim-Nevo started a soup kitchen in Beer-Sheva, where students care for the very poor and help them with their problems and need for social services. She mobilized hundreds of BGU workers to donate monthly, directly from their paychecks. Her dedication and innovation were recognized in 2002 with the national volunteer award, presented by the president of Israel.

And Prof. Julie Cwikel, interested in early childhood intervention, runs regular workshops for new mothers to attend with their babies. Learning to play with their children and enrich their experience, the young women improve their own parenting, and are equipped to train others. She is the founder and director of BGU's Center for Women's Health Studies and Promotion, which promotes women's health research, education and community activism among the women of the Negev.

STUDENT-FACULTY FORUM FOR SOCIAL JUSTICE

When Dr. Roni Kaufman joined the department in 1998, he wondered if he could integrate his background as a community organizer with scholarship. He was happy to find that "the combination became natural."

Believing strongly that social workers should be agents for social change, he founded the Student-Faculty Forum for Social Justice in 2000 to provide the action structure for these activities.

Among the Forum's notable achievements: creating and leading a community coalition that persuaded the government to pass the national Hot Lunch Bill, which provides meals to 140,000 children throughout Israel, and establishing the National Food Security Center, a department-based organization that researches hunger and food insecurity in Israel and advocates for change.

"All projects start with research," Kaufman stresses. "It's an important tool for generating new knowledge and influencing social change. Many things come out of what we do—new community organizations, new policies, new laws." Assessing achievement is a long-range matter, he observes.



Preparing boxes of food to be distributed to local residents-in-need for Passover.

"Change is a process, not a one-time event. We're giving new ideas to social workers about how to organize, build coalitions, mobilize resources.

"I learned about the power of academia, and as a student about my ability to promote solutions to social problems... I learned how to identify community stakeholders and how to mobilize them to promote social change."

— A SOCIAL WORK GRADUATE
WRITING TO DR. RONI KAUFMAN

They learn how the system works, to believe in change, and that everybody can become something.

"Many of our students stay active. I just talked to a student from five years ago, and he told me he is still

integrating what he learned."

Over time, as social action became a department tradition, it was integrated into many classes. Specific courses that center on community projects and intervention are now mandatory for the BSW degree, and the master's program offers a special track focusing on social change in Israel. Rather

than initiating campaigns, the Forum now serves to facilitate new activities.

PUTTING ART TO WORK

Graduates of the social work programs emerge with another special skill-set: the use of creative tools. Classes in art form the centerpiece of a master's degree specialization that combines 20 hours of social work study with 20 hours of specialized art courses. These include art history courses, taught in cooperation with BGU's Department of Arts, and experience with the plastic arts. Only candidates with two or three years background as social workers are accepted to this very popular program.

"Social workers need creativity—a lot of it," explains Dr. Ephrat Huss, the program's director. "Often we're working with multicultural populations, many times with children,

Continued on next page

and a range of different problems, without the proper setting for psychotherapy. So creative tools can be very useful and effective. And this capacity protects social workers themselves—they meet so much stress and trauma every day, situations they have no solutions for. You must be eclectic and flexible in your thinking. The arts give you a perspective on the strengths and coping resources you have, rather than your problems.”

Especially in Beer-Sheva, with its unique mix of the very poor—Bedouins, immigrants from Russia and Ethiopia, and more—doing “classic” social work is impossible, Huss says. “You have to think out of the box; you need to invent ways to help. Doing art creates a transitional space for understanding the problem, finding out how others see it, and exploring it together.”

Art often connects with the department’s spirit of activism. Community empowerment projects are one expression of this alliance. Recently Huss and some of her students, for example, sat with a group of Ethiopian elders who wanted to create a corner where they could gather and talk, as they did in their village. The students



Dr. Ephrat Huss (left) with art therapy students

created a mud bench and a board for a special Ethiopian game.

For another project, girls from a poor neighborhood were given cameras to record what they liked and disliked about where they lived. The results, demonstrating how dirty and unsafe their neighborhood is,



Social work graduate students recently exhibited their own projects at an Arts in Social Work exhibit. Shaked Arieli painted herself “sitting in the bath—with a hat on my head—confronting myself straight on, but also facing the contradictions in myself and integrating them into one picture.” Yasmin Alhuzayel depicted herself with the flag of Israel, a mosque, the churches of Jerusalem, “and me in the middle, because living in a Jewish country, as an Arab, my identity is made up of all these things.” Noa Barkai’s white masks aim to show “how women hide their strength behind masks—they look pretty and decorated, but they are hidden.”

were shown to local officials. Another initiative led unemployed young women from disadvantaged backgrounds to draw their dreams, visions and goals, both to clarify where they want to go, and help others understand their hopes.

The effectiveness of such projects can be hard to measure immediately, Huss says, “but there are always impacts on different levels—especially in empowerment, social change and community action.

“I feel very passionate about this whole idea. I think it’s very positive to look at the social side through the prism of art, not just science. It’s also very helpful to see social work as an art, a craft—not just a skill.”

Huss is constantly surprised at how meaningful working with art is for the social workers themselves.

“They have such fun, and it helps them become more flexible and less institutional. Strengthen the caretaker and you get better service.”

Graduate Noa Barkai (shown above holding mask) is now finishing her master’s thesis and working in the Negev with a children’s leadership program. “For me it was amazing practice in creative thinking and

working with people,” she says. “I use the tools all the time—painting and other materials—to help children express what they’re feeling and thinking. People don’t usually realize they can express themselves without talking. Most of the time they make amazing stuff you can talk about later—then they look at it and say, wow, I did that?”

AN IN-DEMAND PROGRAM

BGU’s approach to teaching social work has generated interest from other schools around the world and collaborations that include colleges in the U.S., Sweden and England. A learning exchange with New York City’s Hunter College, which has a similar social justice orientation, is especially strong. Admission to the BGU program is highly competitive: only one of four applicants is accepted by the bachelor’s program, and the advanced programs are even more selective.

The continuous flow of eager candidates is somewhat surprising. Beyond the work’s extraordinary challenges, social work jobs are often low paying and lacking in benefits.

Continued on page 31

THE UNITY OF MIND AND BODY, BRAIN AND BEHAVIOR

THE SCIENCE BEHIND TODAY'S PSYCHOLOGY

IT'S NOT JUST ABOUT THE COUCH ANYMORE. "We're trying to prepare our students to look toward the future, not the past," says Prof. Nachson Meiran, who holds the David Lopatie Chair in Psychology and who as former department chairman has overseen a dramatic growth in BGU's Department of Psychology. "Our strong vision is to design a department that reflects advances in science and suits 21st century needs."

This determination puts BGU in the forefront of where psychology is moving in both research and teaching. Today, psychology closely aligns with the natural sciences. Recent technology is able to reveal the brain at work, and psychologists can track this activity against physical movement, emotions and behavior.

Educating a psychologist is very different from earlier times. "We give undergraduates a very solid basis in the scientific foundation of psychology," Meiran says. "Our students, including those interested in clinical practice, study neuroscience and brain anatomy, because that's where many significant advances are being made." This distinguishes the program from most universities in Israel, and keeps it on pace with the best American psychology departments.

Ability to work with statistics is essential. "To carry out your own research and intelligently consume

other people's, you need a good foundation in statistics because a lot of brain study requires very good statistical knowledge to process the signals you get from the brain." Some of the mandatory undergraduate statistic courses at BGU are equivalent to those taught on the graduate level elsewhere.

In the interests of a broad education, BGU psychology students all study within a dual-major format. "Our classes include students who also take

"Our strong vision is to design a department that reflects advances in science and suits 21st century needs."

—PROF. NACHSON MEIRAN

philosophy, sociology and anthropology, economics, biology, statistics, and other social sciences and humanities," Meiran says. "This choice reflects our belief that with this broader education, our students will become better psychologists in the end."

Another underlying department principle is to promote the scientist-practitioner model. "In many places there's a schism between research and practice and this is not good for

either. There's a vast amount of research that is extremely relevant to practitioners so they should be exposed to it and well informed. At the same time, people dealing with real life issues bring important questions to science. A whole set of research can develop just from trying to figure out what's happening with an interesting patient."

For many years psychology was part of BGU's Department of Behavioral Sciences, one of the earliest established by the University. Over time a gap felt by many department members widened, as sociology and anthropology grew closer to political theory, while psychology became more experimental and quantitative. In 2007 the department was split.

Today the psychology department inhabits its own building and offers B.A., M.A. and Ph.D. degrees. BGU encourages students to pursue all three degrees, and about 60 percent of those in the M.A. program do continue on.

The clinical track, the most popular, is unique in its emphasis on pluralism. Rather than focusing on one mode of therapy, Meiran explains, students are

Continued on next page

Top: Which is the larger number? People with an arithmetic disability may say the 3 because it is physically larger. Prof. Avishai Henik uses such representations to study the building blocks of numerical cognition.

exposed to a variety of treatment strategies—traditional psychodynamic approaches, newer cognitive behavior therapy, interpersonal therapy, and family therapy. “This keeps them from being indoctrinated into one treatment mode. They are trained to ask good questions and maintain a questioning stance in their practice, too.”

On the research side, the department is producing significant work and earning wide recognition, Meiran says. “In several areas we have a critical mass of people studying specific topics and making some major discoveries.” Two years ago the department received a glowing review from the Committee for the Evaluation of Psychology and Behavioral Sciences Studies, which pronounced it to be “truly a 21st century department based on the unity of mind and body, brain and behavior.”

Here is a sampling of some of the interesting work being done.

TZVI GANEL ON PERCEPTION

Dr. Tzvi Ganel, a neuropsychologist, explores basic psychophysical rules—how we perceive the world. His research focuses on visual perception in two main areas: “face perception,” delineating the cognitive and neural

aspects of how faces convey information and are interpreted, and the visual control of action, a fundamental ability that enables us to interact with the environment we see.

He has demonstrated that a long-accepted psychophysical principle called Weber’s Law does not always apply for all aspects of human behavior. The law posits that the human ability to tell the difference between an object’s attributes—its size, for example—is always relative. Different types of visual illusions that make an object look longer than another one, though it may actually be smaller, can also fool us.

“What I show is that the law does not apply to visually guided action. When we estimate the size of objects, the accuracy of our estimation is always relative and we can be fooled. But, when we grasp objects of any length we are accurate and absolute, no matter what visual illusions we present.”

In one set of tests people are told to demonstrate the object’s size with their hands, and then take hold of it. “No matter how inaccurate their estimation, their hands always open to exactly the size needed to grasp the object,” Ganel says.

This research supports the theory that we have two separate cortical systems, one for visual perception and another for action based on what we see, and begins to define the properties of the two systems. “This has implications for human behavior. And we could learn how to help people who may, for example, have a lesion in one system and not the other.”

GOLAN SHAHAR ON DEPRESSION

Prof. Golan Shahar is a clinical psychologist and a fervent research advocate.

“We were the first department to develop a track that unequivocally adheres to the vision of basing clinical practice specifically on the best evidence available,” Shahar says. “All our faculty members are scientist-practitioners and the students are taught along those lines.”

The traditional rift between clinicians and researchers is similar to the one that has long prevailed in medicine, he says; it results from differences in culture and skills. “But the gap must be bridged because science is the best show in town for quality procedure. We must know that what we’re doing with patients is effective—but also must tailor science to the needs of a particular patient. The dialogue and exchange are beginning to occur but must go much further. I believe we in the department are moving it forward.”

Shahar’s lab has broad interests in interpersonal processes, such as aggression, motivation, personality, supportive relationships, resilience and stress-resistance, and self and identity. His personal focus is the study of depression. This area drew him because it is an affliction that members of his family struggled with, he explains, and because early in his career, he observed that this devastating condition was highly prevalent.

“We’re concerned with depression as a multifaceted, complicated biosocial condition that



Ph.D. student Erez Freud (left) and M.A. student Gal Namdar conduct an experiment in Dr. Ganel’s Laboratory for Visual Perception and Action. **Right:** This triangle is an “impossible object.” Dr. Ganel and Erez Freud are looking at the brain to find where the memory of it resides.

can be lethal, and trying to model how the individual—interacting with the social environment and constrained by biology and psychological makeup—can be resilient.

“We’re trying to understand what makes people resilient in the face of stress, and not develop depression even in the toughest conditions, like under missile attacks or living with a chronic debilitating illness.”

Shahar says that social relationships are emerging as a major focus in psychology. “It’s a great source of protection against stress and I’m trying to understand specific aspects that make us strong and protect us against suffering across a wide range of conditions.” How the body reacts to stress, how stress leads to violence and how social relationships might protect against both are part of the lab’s research scope.

Shahar conducts his investigations by following people over time. He uses quantitative tools to test various theories and find out which ones survive empirically, and tailors interventions accordingly.

ORA KOFMAN ON PESTICIDES AND DEVELOPMENTAL DISORDERS

Prof. Ora Kofman researches the psychobiology of stress during development and adulthood, and its effect on higher cognitive processes and emotional regulation. She carries out behavioral studies and also focuses on the role of a specific neurotransmitter and its influence on early development.

Her recent projects investigate the impact of pesticide exposure on social and emotional behavior. Working with mice, her lab found that exposure to pesticides during gestation or soon after birth can increase the extent of fear and anxiety in adult mice to varying degrees. The goal of the research is to relate behavioral changes to a particular enzyme that the pesticides might affect.

“We’re now branching out to look at a model for autistic behavior, because there have been findings that

show pesticide exposure may be related to autism spectrum disorder.

“We’re all exposed to pesticides,” Kofman says. It is common not only for agricultural workers, but in tenement neighborhoods where spraying is frequent and windows are kept closed for climate reasons, such as in the American northeast.

“An enzyme produced by the liver breaks some of the pesticide down. But how active the enzyme is varies among people. If mothers have weak activity of this enzyme, their children are more likely to have mild developmental delays, or autistic-like symptoms.”

A possible solution: Pregnant women with genetic risk factors could be monitored for pesticide exposure during pregnancy.

Pesticides are also common in food. Kofman points out that recent epidemiological studies show that children normally exposed to pesticides in their diet have more attention deficits, and that eating organic foods can reduce their level.

“Some people may be more sensitive. If we find the genes to determine which people those are, we can recommend that they eat organics during pregnancy.

“I hope our research leads to some indication of one cause of autism or the risk factors and that it’s actually something that can be reversed or prevented.” It is already known that smoking lowers the mother’s enzyme activity, so “looking more specifically now at pollutants and contaminants can make a very big difference.”

AVISHAI HENIK 1+2=4

Cognitive psychology deals with higher functions, such as language, attention and numerical abilities. “This field has been developing very fast in recent years,” says Prof. Avishai Henik.

“We are trying to study not only the mental operations involved but also the brain systems that serve these

operations. We do both through behavioral experiments, studying individuals who have some kind of deficit, and newer brain imaging technologies like fMRI [functional magnetic resonance imaging]. The general plan is to unravel the building blocks of human cognition and to reach a comprehensive understanding, and hopefully suggest treatments for deficits.”

Henik studies numerical cognition, how people process numbers, and a deficit called dyscalculia that makes



Prof. Avishai Henik, Zlotowski Chair in Cognitive Neuropsychology, with student

simple arithmetic difficult for many. “We look at the building blocks of arithmetical thinking—like enumeration, the ability to compare sizes and amounts—and by creating a general picture of the mental operations involved, try to understand the deficiencies and how to fix them.”

Dramatic progress has been made in understanding and remediating dyslexia, a deficiency in reading, but progress with arithmetic deficiency lags far behind, Henik says. His work in this area has just been recognized with a \$2.6 million grant from the European Research Council. His proposal, “Size Matters in Numerical Cognition,” focuses on the role of the ability to evaluate size in developing numerical ability. He plans to study the underlying brain system involved, and the possibility that this is the “core system” in developing an understanding of numbers.

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Henik's lab also explores aspects of cognitive control, such as selective attention. To achieve a goal, Henik explains, focus is essential, and requires that irrelevant information be ignored. It has recently been found that the brain's frontal lobe area is heavily involved in the development of intelligence—where cognitive control is also located.

"It's possible that these things come together nicely, and that the ability to select or inhibit other things en route to a goal is a major part of intelligence."

Another research area that excites Henik is synesthesia, the conjunction of the senses. Some people see numbers in specific colors, or may experience a taste when they hear a name, or be subject to many other variations.

"It tells us something about possible connections that can happen in individuals and are not normal." In one experiment, he found that it could be temporarily created through hypnotism.

YOAV BAR-ANAN IT'S ALL ABOUT ATTITUDE

Dr. Yoav Bar-Anan is driven to study social cognition, specifically, how people behave and what rules govern their behavior and thought. "I have strong tendencies to explain everything I see. If we're serious about knowing what causes people to hold certain attitudes and behave in certain ways, scientific method is the best way to try to find the answers. But it's very difficult to measure attitudes because people don't know very well why they behave or think as they do. So we use indirect measures."

People can be asked questions not about their beliefs, for example, but about attitudes associated with those beliefs. Some of the research involves testing indirect measures against each other to see if they produce the same results and can be trusted.

Bar-Anan's findings indicate that people's judgment is strongly influenced without their conscious knowledge. We may believe we're fair, but in fact make consistently biased choices. We might believe we

give time to a good cause because we want to help people, but in fact may do it to feel stronger, more powerful or better than others. We might think we're unprejudiced but choose to hire from one group rather than another. We tend to cover for ourselves, Bar-Anan says.

"Many of our decisions are governed by attitudes or behavior that do not involve conscious thought." This is not necessarily bad—some research shows that people make better choices when they act automatically rather than deliberately.

"It's a question of what kind of choices should be made using conscious rationality and when people should just go with what they feel. When people are experts, they should

"Many of our decisions are governed by attitudes or behavior that do not involve conscious thought."

— DR. YOAV BAR-ANAN

go on their gut feeling—they already have the knowledge and have made the choices many times before. When a choice is very complex the gut reaction might still be better. If you have too many details to consider—like when you're buying a car—many times our consciousness isn't smart enough to do all that computation. So, some argue that it's better not to think about it too much."

While researchers know how to change attitudes in general, they are not yet very good at changing existing negative attitudes, toward social groups, for example. But Bar-Anan hopes that understanding how attitudes are formed—such as how we come to like and dislike others—will lead to knowing what kind of information will help people change their minds. Potential applications abound: Israeli-Arab relationships are among them.

NACHSHON MEIRAN ON MEMORY, INTELLIGENCE AND CREATIVE THINKING

Prof. Nachshon Meiran explores executive function: the brain processes that involve planning, abstract thinking, memory, and initiating and inhibiting actions.

"I'm particularly interested in cognitive flexibility, the ability to switch between trains of thought. Our ability to completely change our interpretation of what we're faced with is relevant to creative thinking and some forms of emotional regulation. For example, we're angry if we interpret someone's action as meant to hurt us, but if we change that interpretation to believe the action was unintentional, we're not angry.

"Being able to switch is quite challenging. We find ways in the lab to measure cognitive flexibility in the actual process at the brain level, to find which neurotransmitters are important to it and which parts of the brain are critical to this functioning."

Recently Meiran began a program to try and train people to improve some of these functions. Until recently, it was believed that they were purely a matter of genetics, and most scientists still believe that. But a few studies, including one done at Meiran's lab, have shown that at least some functions can be modified, including intelligence and working memory. Meiran is working on computer games as mental exercises to improve and maintain executive functioning, but much remains to be understood, he says.

"In one recent case, a student and I published a paper about the effect of rules on creative thinking. We gave people in the experiment a problem that needed creative thinking, a set of stimuli classified in a manner they didn't know. Our hypothesis was that if we gave them instructions to follow, and had them do a few trials, it would improve their ability to figure out the rules. But the opposite happened—even one trial drastically impaired their ability to think

Continued on page 31



CHANGING THE MEDICAL EDUCATION MODEL

EDUCATING TOMORROW'S DOCTORS

is a daunting prospect. There is so much to know, so many tools and techniques, and at the same time such escalating demand for services as people live longer. And, the high-pressured medical environment leaves less and less time for experienced professionals to guide new ones through their early patient work.

BGU's Faculty of Health Sciences (FOHS) is building a solution: the Field Family Foundation Medical Simulation Center, populated by highly sophisticated, electronic "human stand-ins." FOHS has been making good use of this technology since establishing its paramedic training program 13 years ago, says Dr. Lior Neshet, head of the Emergency Medicine Department and the medical simulation unit.

"For 10 years we have very successfully trained doctors and paramedics using small simulation laboratories. But with recent advances, mannequins can simulate much more, so now it's natural to use them for the whole medical school—and all our training.

"It's the next education revolution—and because of our experience with the paramedic program, we're

positioned to take advantage of the opportunities."

Already, simulation mannequins are part of the learning experience for medical students, other specialists and area physicians who come for advanced and refresher courses. Now, thanks to substantial contributions from the Joyce and Irving Goldman

"The three points for 21st century doctors are to be knowledgeable, skilled and human. The most important way to achieve that is to use more simulation."

—PROF. SHAUL SOFER, LUBNER FAMILY CHAIR IN CHILD HEALTH AND DEVELOPMENT

Family Foundation and the Field Family Foundation (see story on page 6), a 20,000 square foot facility will be built with 18 rooms and four large flexible spaces that can be used for ICU training.

The investment is considerable: A single "high fidelity" mannequin can cost more than \$100,000, Neshet says. But the belief is strong that this is the future of medical education.

WHY SIMULATE?

The ethics of medical training were a major motivating factor for Prof. Shaul Sofer, the former dean and the driving force behind building the new center. "The three points for 21st century doctors are to be knowledgeable, skilled and human," he believes. "The most important way to achieve that is to use more simulation."

From a patient's viewpoint, he notes, no one wants to be the subject of a doctor's first operation or intravenous needle insertion. "We feel it is an ethical imperative for students to start their training on simulated patients, and so we want to do that beginning with the physical examination and all the procedures."

For the student, there's always a learning curve, Dr. Neshet stresses. "If you learn to do something on a mannequin, you already have some experience and transition to real life becomes easier. The learning is not theoretical but practical and helps to build your confidence. It's very frightening to hear about something, then actually go do it—better to first do it without causing harm, in a safe and controlled environment."

Continued on next page



WHY I CHOOSE TO TEACH AT BGU

By Stewart Flink

I AM IN THE MIDST of my career, running Next View Capital (www.nextviewcap.com), a hedge fund I founded in Chicago in January of 2009. With 30 years of experience in different aspects of the financial world, I have always wanted to teach. There is something about teaching while

you are actively engaged in a business or profession—it is an opportunity to share what you are learning and doing on a real time basis.

I believe that students can learn more by responding to real world situations in the classroom. As a student at the Kellogg MBA program, some of my favorite classes were with teachers who came in from businesses and taught at night: investment banking, real estate and accounting, to name a few subjects.

My mission today is three-fold:

- To educate students in specialized areas of finance and investing
- To promote potential job creation in Israel in the areas of hedge funds, investment banking, securities law, and money management
- To increase the sophistication of how professionals in Israel approach capital markets, both domestically and abroad

Students can be taught with real case studies that I have experienced personally, without explaining actual outcomes. This way I can see their reasoning and problem solving skills, and how they apply what they learn in the classroom to actual situations.

I will teach an investments class in the MBA program at BGU this summer for 12 weeks. It is an ideal situation. The Honors MBA program is taught in English with an emphasis on the practical as well as theoretical. After visiting the University, where I sat in on an actual class, I was amazed to see how internationally diverse and bright the student body is.

If I can help to create one job in Israel or network with students to find jobs in Israel and in the U.S., or even teach them to be better investors—both personally and professionally—then I will accomplish my mission. In addition, BGU has another dimension that intrigues me: I have an interest in being exposed to some of the world-class science and technology emerging from the University, such as in water and irrigation, robotics, and biotech.

WHY I JOINED THE AABGU BOARD

I believe the Negev is the future of Israel, and its development is essential for Israel to grow economically. If Jerusalem is the soul of Israel and Tel Aviv the mind, then Beer-Sheva is the heart of Israel. Being in the desert has a certain mystique to it, and students who enroll in an MBA program are not only taking a risk, but must clearly have an entrepreneurial spirit.

I relate to BGU on several different levels. It is a very entrepreneurial university doing highly innovative, cutting-edge research. BGU is becoming something unique and important in Israel. The University has established itself as a pillar in the Negev, fulfilling the mission that Ben-Gurion himself created more than five decades ago. ■

The approach works well in helping new doctors learn how to do intimate physical exams that are seldom taught, like rectal and vaginal exams. Similarly, women are naturally unwilling to give large groups of medical students experience in diagnosing breast cancer. But an actress can come in wearing a model breast with a lump. The student must talk to her, take a history, do the exam, then discuss the results and next steps.

Simulation fills a need with emergency situations, as well. In real life situations, students rarely get to participate because the doctor is unlikely to step aside and let a student handle it. This is true of rare medical occurrences, as well.

Highly complex situations can also be simulated, Nesher says. “A pregnant woman can need an emergency delivery and the student must deal with that. A ‘patient’ [mannequin] can come in with a heart attack and water in his lungs, with simulated sounds. The student must diagnose and can intubate, ventilate, inject medication, check blood pressure and oxygen saturation—virtually everything.



Nursing students practice on mannequins.

“If he gives an incorrect diagnosis or medication, the mannequin gets sick and dies. If he’s correct the patient gets better. And it’s all filmed with closed-circuit TV so we can stop and say, here’s your problem: you did A but should have done B. It’s excellent for teaching specific skills and interaction.”

In fact, simulation’s ability to teach collaboration drives hospitals and medical insurance companies into pressing for this kind of equipment. It is well documented that many medical errors result from lack of communication between specialists and team members. But this simulation practice is generally reserved for doctors. “We say go lower,” Nesher comments. “Start with

Continued on page 31

MASTER OF MANY TRADES TAKES THE *REALLY* BROAD VIEW

IN THE PAST decade, Dr. Yaakov Garb—with a background in environmental studies and the social studies of science and technology—has published research on a dizzying range of subjects.

He's written on freight traffic, congestion pricing, and the Trans-Israel highway project; on desalination and solar energy policies; on consumption and sustainable development in Israel; on urban processes in Aqaba, Jerusalem, Warsaw, and Prague; on end-of-life decision making; and Bedouin women's exposure to hazardous wastes—to name just a few.

The subjects come to Dr. Garb, a senior lecturer in the Department of Man in the Desert at the Jacob Blaustein Institutes for Desert Research, in different ways. As an internationally known expert on transport and the politics of mobility, he is often commissioned to undertake studies by decision-makers and policy planners. In other cases he is drawn by curiosity, exchanges with colleagues or thesis topics that students approach him with.

Several recurring intellectual themes run through these disparate-sounding projects, he points out. "Large socio-technical systems have similar dynamics, whether they are systems

for producing water, mobility, food or energy," the interdisciplinary researcher explains.

And, increasingly, Garb has begun to reflect on the concept of interdisciplinarity itself. "Beyond multidisciplinary—one discipline alongside another—I am intrigued by how disciplines start to cross-fertilize and even interrogate each other, so one discipline lets you question the assumptions of another."

As an example, he describes the approach he brings to the topics studied by his colleagues at the Blaustein Institutes. Take desertification: "You can look at something like soil erosion from the scientific level, but also at the social level. What are the human practices linked to erosion at a given place and time? How are these linked to power and political-economic relations within a village, of the village within a state, and the state within the world system?"

"And, also, the level of images and discourse: how and why does a term such as 'desertification' emerge as a dominant way of thinking about things in a given moment? What coalitions does it allow? What moves does it facilitate or block? What kinds of expertise does it honor? What terms

preceded it and which terms—such as 'land degradation'—may supplant it?"

"You have to keep these different balls in the air at once. To try to understand and have a lot of respect for the technical aspects, but also to take a step back from these, looking not only at the sociology of the context in which phenomena occur, but also of the ways in which they are described and tackled by various players, including the scientists."

SEEING IN MANY DIMENSIONS

If this sounds like a complicated way of examining the world, Garb won't disagree. But for him it is a given that the interdisciplinary approach reflects how the world works, and that if we let specialists focus our attention too tightly, we limit true understanding and risk a greater number of unintended consequences.

Since joining BGU, he has completed a series of studies commissioned by USAID and the United Nations Development Program on problems related to freight and tourist movement

Continued on next page

Top photo: Dr. Garb (right) and colleague, labeling samples of soil and ash around a large burn site to test for presence of heavy metals.

within the Palestinian areas, with encouragement from both Israeli and Palestinian stakeholders.

“With an interdisciplinary toolkit you can really leverage limited resources. I asked the surveyors to capture all the vehicles with time-stamped digital photos, and since I once was a programmer, I fed these into a database used by professional photographers. Then we extracted license plate numbers from the photos, and I wrote some code to get all this into my statistical software, so that I could systematically analyze travel times from point to point, patterns in the functioning of the crossings, and so on.

“Then I wondered how big the entire fleet of trucks using one passage was, and realized suddenly that in ecology, you catch animals, mark them and release them, then estimate the population based on the rate of recapture of what you’ve already marked. So I could use repeat license plates the same way and estimate the overall fleet size.”

The commonplaces of one discipline become innovative in another.

Garb’s results showed that the existing passages between the Israeli and Palestinian territories were in fact inadequate, “in a way that no one could argue with—we could instantly pull up and display the traffic volumes, even photos, at a given time and place.”

Ordinarily, the study might not be meaningful in academic terms, Garb says, but “it changed the lives of many people for the better”—an important criterion for him. But then he went further.

“At one key checkpoint, the authorities thought they were seeing almost all the potential traffic, and I showed that they were seeing just a fraction of this, and would never be able to handle the full traffic. The soldiers at the checkpoint and the Palestinian truck drivers knew where the unofficial passage points were, but as you went higher in the organizational hierarchy these became invisible, and I began to be intrigued by how an organization manages to not know

what it knows.” The result was a recent chapter in a book on the sociology of mobility and borders.

SO MUCH TO KNOW

Garb’s “straddling” among disciplines begins with his personal history. Born in South Africa, he made *aliyah* to Israel at 13 with his family and was educated in the U.S. He began his studies in computer science, moved into environmental analysis, and then the sociology of science and technology with doctoral and postdoctoral



Dr. Garb (far right) with Palestinian and American colleagues, discussing water efficiency measures in the Hebron stone-finishing industry.

studies at Berkeley, MIT, Harvard, and Princeton. He has lectured at Brown and Hebrew Universities, and before coming to BGU in 2006, spent almost a decade as a consultant and program director in the area of transport and urban policy.

Garb happily collaborates with others. Together with a microclimate specialist he is currently looking at what makes people feel comfortable in different thermal conditions. In addition to physical parameters, “my colleague and I are co-supervising a master’s student looking at people’s thermal history and how two groups of 20 native Israelis and 20 people who had come from the Soviet Union respond to the same physical conditions: Does their past history explain their response to physical conditions? Yes it does!

“We can probably take this an additional stage in the future. Is this

physical conditioning or a question of language, or of cultural connotation—people have different expectations about putting up with discomfort.”

UNEXPECTED RESULTS

Following the connections can lead Garb to unexpected places. For example, he was commissioned by a think tank to review the planning of the massive Trans-Israel highway.

“It helped that I could move between different spheres—planning issues, the modeling and cost-benefit analysis side, and the assumptions built into these. Then I noticed things about the social context, how so many people I talked to told me they thought the highway was already being built and it was too late to do a study. I started asking the deconstructive questions: How did it come about that it was always ‘too late,’ even in the earliest stages?”

As a result, in addition to turning out the 300-page technical study, Garb wrote an academic article called “Constructing the Trans-Israel Highway’s Inevitability.” This analyzed the strategies used by project proponents to reframe the issues and marginalize opposition, a process that both sides need to understand, Garb observes.

Currently, Garb is enthusiastic about his work with a doctoral student studying the Islamic movement in the Negev. The young man is being cultivated for leadership among the Bedouin. Garb is helping him gain the analytic distance needed to document the structural contexts of the movement’s emergence and dynamics.

Another project, which began with a summer intern studying household water use patterns, epitomizes the unexpected developments he encounters. He believes they have stumbled across the reason for a cancer cluster and has assembled a small team that is concurrently analyzing environmental samples, delving into the history and dimensions of the contamination they suspect is the cause, building a coalition to address the economic and

Continued on page 31

REGIONAL NEWS

For information about upcoming events in your area, please visit: www.aabgu.org/regions-events

GREAT LAKES

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Steven Franklin, *Director*
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LARRY GOODMAN PLEDGES \$3 MILLION FOR BGU'S OPEN APARTMENTS PROGRAM

Thirty years ago, Chicago real estate businessman Larry Goodman had a chance encounter with an official from Israel's Ministry of Housing. That meeting led to an innovative initiative through BGU called the Open Apartments Program.

In lieu of paying rent, selected students live in Beer-Sheva's underprivileged neighborhoods and dedicate at least eight hours of service per week. Students provide local children and adults with a range of activities from teaching, planning holiday gatherings and counseling, to assisting with household management.

The Lillian and Larry Goodman Foundation's recent pledge of \$3 million for the newly named Lillian and Larry Goodman Open Apartments Program will ensure the program's sustainability and growth.

"We must instill the concept of giving back to the community in our young people. This program encourages communal engagement that is of benefit to both the students and the families they mentor," says Larry Goodman.

GREAT LAKES WELCOMES NEW REGIONAL DIRECTOR

AABGU is pleased to welcome its newest staff member to the team in the Great Lakes Region. Steven Franklin, of Evanston, Illinois, has spent the past few months acclimating to his new role as regional director.

A member of AABGU's Great Lakes regional board for over a decade, Franklin has taken on the important role of cultivating the AABGU community in the heart of the United States.

"In the Great Lakes region, our abundance of natural resources gives us a special appreciation for BGU's mission to develop the Negev," Franklin says. "BGU truly is bringing imagination, creativity and research to the desert, benefiting Israel and the world."

Franklin brings to his new position a wealth of knowledge and experience after 30 years in the finance industry, as well as local Jewish community leadership, all of which will greatly benefit BGU.



Larry Goodman signs pledge for the Lillian and Larry Goodman Open Apartments Program, with BGU's President Prof. Rivka Carmi and Vice President for External Affairs Prof. Amos Drory.



Steven Franklin, AABGU Great Lakes regional director, on the Marcus Family Campus, Ben-Gurion University of the Negev.

Photo: Sissy Block

GREATER FLORIDA

Rich Bernstein, Alan Hurst, Billy Joel, Joel Reinstein, Lyon Roth, Dr. Rubin Salant, *Greater Florida Advisory Committee*
Elise Dolgow, *Director*
Joy Felton, *Associate Director*
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COLLABORATIONS AND SPECIAL VISITS

BGU President Prof. Rivka Carmi visited the region in February, where she met with several community leaders and donors in South Florida. Her visit culminated with The Presidential Lecture at the University of Miami's Sue and Leonard Miller Center for Contemporary Judaic Studies. Prof. Carmi spoke about "Reimagining the Ivory Tower in Israel: The Responsibility of Academia to Society."

The special lecture was part of the continued collaboration between the two universities, which began with the signing of a memorandum of understanding and University of Miami President Donna E. Shalala's receipt of an honorary doctorate from BGU in May 2011.

In December, Florida Governor Rick Scott led a 50-member delegation of political and business leaders, including two state senators, to Israel. BGU was the only Israeli university on Scott's agenda during his week-long visit. The governor received a Ben-Gurion medal from BGU's rector and he witnessed the signing of a memorandum of understanding between BGU and the University of South Florida.

Visiting the University and the surrounding Negev region is the best way to truly feel the pioneering energy of BGU. Several recent visits to BGU were organized for Floridians Rick Kennedy (COO of Aventura Hospital), Marilyn and Edward Kaplan (Boca Raton), Rachel and Max Javit (Boca Raton), Tamar Meyer (Aventura), Jane and Alan Cornell (Boca Raton), and Bonnie Ury (Lake Worth). If you'd like to arrange a visit to BGU, contact Elise Dolgow.



Top: Leon Hertz; Rhoda Bernstein; BGU President Prof. Rivka Carmi; Rose Rubin; Billy Joel. **Bottom:** Dr. Rob Colton; Prof. Rivka Carmi; Joel Reinstein.

The Greater Florida Region congratulates its three Zin Fellow Leadership Development Program participants: Gary Lesser from Palm Beach Gardens, Marc List from Boca Raton and Renee Rosenheck from Atlanta. For more information about Zin Fellows, see page 3.

GREATER NEW YORK

Lite Sabin, *Chair*
Kevin M. Leopold, *Executive Director – Northeast*
Liora Avitan Seltzer, *Associate Director*
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SHOWCASING BGU TALENT

The Greater New York Region hosted a remarkable series of programs in the past few months, highlighting the tremendous talent of the faculty and students at BGU.

In addition to several programs in New York City, the region took its lecture series on the road to New Jersey, Long Island and Connecticut. "We take great pleasure in



Ben-Gurion Racing Team Project Manager Ben Levitan (right) with his teammates and the competing racecar they built.

reaching out to new communities and creating meaningful relationships outside of the five boroughs,” says Program Manager Dana Ben-Benjamin.

In November, Ben Levitan, a third-year student in BGU’s Department of Mechanical Engineering, shared the inspiring story of the Ben-Gurion Racing Team. The team designed and built a single-seater race car that competed in the international Formula SAE race in Italy. It is the first Israeli team to enter this competition.

As Team BGR project manager, Levitan took great pride in the team’s unprecedented results. Team BGR came in 15th place out of 57 teams overall, and placed first among the eight teams competing for the first time.

In February, Prof. Dan Blumberg, BGU’s deputy vice president and dean for research and development, visited Great Neck to highlight technologies being developed at the University’s Homeland Security Institute to safeguard Israel and its allies.

Dr. Paula Kabalo, director of the Israel Studies International Graduate Program, visited Brooklyn and Scarsdale to share her wealth of knowledge about the David Ben-Gurion Archives. The Archives house Ben-Gurion’s extensive collection of personal papers, diaries and letters.

She presented a fascinating look into the early history



Prof. Dan Blumberg (right), director of BGU’s Homeland Security Institute, with Miriam and Oscar Zanger in Great Neck.

of Israel. Dr. Kabalo also discussed the importance of having archival material to study and learn directly from Israel’s first prime minister.

To arrange a future program in your community, please contact Dana Ben-Benjamin at 212-687-7721 ext. 102.

GREATER TEXAS

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KOSHER DINING EXTRAVAGANZA CELEBRATES THE REGION’S IMPACT ON BGU

Greater Texas Region’s signature event, the 11th Annual Gourmet Kosher Dining Extravaganza, was held March 12, 2012 at the Bayou City Event Center. It celebrated the tremendous impact the Texas community has made on BGU over the years, recognizing projects including:

- AABGU Student Dormitory Complex – Marjorie and Gustave Levey
- MRI for BGU’s Brain Imaging Research Center
- BGU’s Marcus Family Campus – Ellen Marcus and the Marcus Family
- Kidumatica: The Youth Mathematics Forum – Velva G. Levine and H. Fred Levine
- The Faculties of Natural Sciences and Health Sciences – Soref-Breslauer Texas Foundation

Jill and Nat Levy chaired this community-wide event, with all funds raised going to the American Associates Village at Sede Boqer.



Chef Alon Shaya cooking kosher New Orleans-style cuisine.

The guest speaker was Kebba N. Sonko from The Gambia, West Africa, who received his master's degree from BGU's Albert Katz International School for Desert Studies. Following his studies, he returned to his home country to apply his gained knowledge to increasing Gambian food security and fueling the economy. Sonko is now the permanent secretary of the Ministry of Forestry and the Environment in The Gambia, serving as the chief administrative and policy officer.

Leading up to this event was a Patron Dinner Reception held at the home of Dr. Esta Kronberg and Bill Davis, where Israel-born Chef Alon Shaya from Domenica Restaurant in New Orleans cooked up "kosher-meets-Creole food."

BGU Prof. Dr. Michael Feige, from the Ben-Gurion Research Institute for the Study of Israel and Zionism, spoke in Austin at the 10th Annual Tapestry of Jewish Learning in January about "Collective Memory in Israel: How Israelis Remember David Ben-Gurion Today." Austin Regional Chair Ellen Marcus



Austin Chair Ellen Marcus and her husband Harvey Malyn

generously hosted Dr. Feige at a dinner reception the night before his talk.

MID-ATLANTIC

Jack R Bershad, *Regional Chair*

Connie & Sam Katz, *Philadelphia Chapter Chairs*

Marla & Dr. Robert Zipkin, *Philadelphia Chapter Vice Chairs*

Claire Winick, *Director*

Andrew L. Demchick, *Associate Director*

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HONORING BEN-GURION SOCIETY MEMBERS; HOSTING COMMUNITY EVENTS

The region held its Annual Community Event at the National Museum of American Jewish History on November 20, 2012, honoring 14 of its most generous contributors who are Ben-Gurion Society members. Leadership for the event included Co-chairs Roslyn and Chuck Epstein and Drs. Mona and Alton Sutnick; Tribute Journal Chair Stanley Ginsburg; and Tribute Journal Vice Chairs Marla and Dr. Robert Zipkin.

All proceeds from the event went to the American Associates Village at Sede Boqer. Thanks to everyone for supporting this project, with a nod to major contributors Helen and Jack Bershad; Roslyn and Chuck Epstein; Sylvia and Ellis (z'l) Segal; Gerald Shreiber; and Harriet Soffa.

As always, this warm and welcoming community hosts many events through the year. Recent highlights include:

- Kick-off reception at Mona Zeelandelaar's home with BGU President Prof. Rivka Carmi
- Patron Party hosted by Sylvia Brodsky, with BGU Vice President for Research and Development Prof. Moti Herskowitz



Event at Temple Beth Hillel-Beth El: Dr. Alton Sutnick; Dr. Mona Sutnick; Dr. Michael Feige; BH-BE Israel Advocacy Committee Chairman Lee Bender; and Israel Advocacy Committee Vice Chair Richard Chaitt

- Start-Up Negev programs with Prof. Moti Herskowitz at Congregation Keneseth Israel in Elkins Park and the Jewish Community Foundation of Southern New Jersey
- Reception featuring Prof. David Roskies from BGU's Center for Yiddish Studies hosted by Aimee Katz and daughter Kathy Katz Hall
- Latkes and Vodkas presented by the Negev Forum and Tomorrow's Leadership Committees at the home of Michele and Rob Levin

- Dinner with Dr. Yoav Sharoni from the Department of Clinical Biochemistry, hosted by the Health Sciences and Academic Affiliation Committee
- Philadelphia Chapter Co-Chair Sam Katz and overseas program alumna Jennifer Rosen at Tiferet Bet Israel in Blue Bell
- Dr. Michael Feige from the Ben-Gurion Institute for the Study of Israel and Zionism at Temple Beth Hillel-Beth El in Wynnewood
- 13th Annual Snowbird Reception with Roy J. Zuckerberg, chairman of BGU's board of governors

Special thanks to the Roberta and Ernest Scheller, Jr. Family Foundation for a new commitment reflected in the naming of the atrium in the Guilford Glazer Faculty of Business and Management.



Event at Tiferet Beth Israel: Men's Club Vice President Ben Simkin; Rabbi Joshua Kalev; Jennifer Rosen; Philadelphia Chapter Co-Chair Sam Katz; and Men's Club President Ed Cohen

NEW ENGLAND

Max Schechner, *President*

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BGU FORMS PARTNERSHIP WITH UMASS LOWELL

In early February, Ben-Gurion University of the Negev and University of Massachusetts, Lowell, signed a memorandum of understanding, marking the beginning of formal cooperation between the two academic institutions.

UMass Lowell Chancellor Marty Meehan and BGU Rector Prof. Zvi HaCohen view this partnership as a way to advance research at their respective universities, as well as promote peace in the region.

The two universities share similar research endeavors. UMass Lowell is conducting water quality and soil research projects, both of which complement the research going on at BGU's Jacob Blaustein Institutes for Desert Research.

INTRODUCING KEVIN LEOPOLD EXECUTIVE DIRECTOR, NORTHEAST

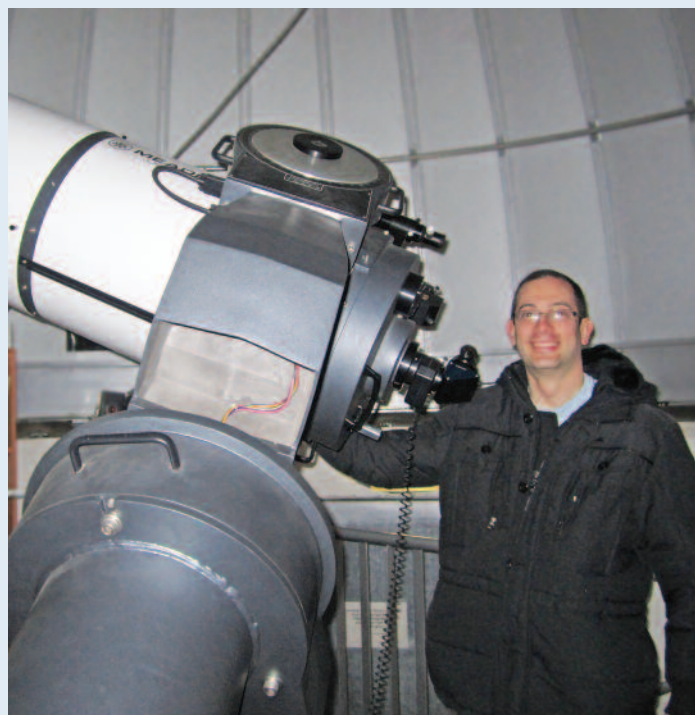
AABGU recently announced the promotion of Kevin Leopold to the position of executive director, Northeast.

Kevin has been the director of the Greater New York Region since 2005. Under his leadership, the region has consistently increased its level of giving to BGU and expanded community participation in lecture presentations and major gala events.

His experience and success make him well equipped to extend his abilities "northeastward," assuming responsibility for the New England Region while continuing to direct the Greater New York Region.

Based in New York, Kevin will travel throughout New England regularly and will meet with leadership and community members. He's excited about bringing his passion for BGU to the area. Stay tuned for a lecture series coming to a location near you.

For more information about upcoming plans for AABGU's New England Region, contact Kevin Leopold.



Kevin Leopold, Northeast executive director, just checked out the planet Jupiter at BGU's Ilan Ramon Youth Physics Center.

NORTHWEST

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Daphna Noily, *Director*
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CELEBRATING LOCAL SUPPORTERS AND BGU ALUMNI

The Northwest Region has been actively engaged with its supporters locally and in Israel. In November, its annual regional board meeting was held at the Concordia-Argonaut Club in San Francisco, featuring Prof. Steven Rosen from BGU's Archaeological Division. He demonstrated how cutting-edge technology is used in archeological work in the Negev.

Regional President Sonny Hurst updated the group on local progress and programs, and National Board Member Coby Dayan gave a presentation on the American Associates Village at Sede Boquer, which will provide much needed additional housing for international graduate students.

Walter and Vera Obermeyer, Founders and Living Legacy Society members, traveled to Israel for their first ever visit to BGU. In this trip of a lifetime, they were extremely impressed with both the Marcus Family Campus in Beer-Sheva and the Sede Boquer campus. Their visit coincided with Ben-Gurion Day, a day-long dedication to the achievements of the University's namesake. The Obermeyers also witnessed the dedication of a beautiful new sculpture named "Spring for the Negev" created and donated by Phlyp Koshland. Phlyp's magnificent sculpture will bring more beauty and meaning to the Sede Boquer campus, where her father's legacy has already made a huge impact.

On the seventh night of Chanukah, BGU alumni gathered at the home of Riki and Coby Dayan. They spanned many years, ranging from those who graduated in the 1970s and others who are currently completing their Ph.D.s. Several alumni who grew up in Beer-Sheva remarked how important BGU was to them long before they attended



Top: Walter and Vera Obermeyer on their recent visit to BGU have lunch with students from the Community Action Unit. **Bottom:** BGU alumni gather at the home of Riki and Coby Dayan for a Chanukah celebration.

the University. Others talked about how they met when they were students, and one couple even brought their four young adult children to join in the festivities. The event culminated with attendees lighting the Chanukah menorahs they had just created.

SOUTHWEST

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A SPECIAL BIRTHDAY CELEBRATION

Dr. Howard Marcus, whose generosity is reflected in the naming of BGU's main campus, celebrated his 102nd birthday on September 15, 2011.



Lottie gives Howard a birthday kiss.

A very special party in San Diego was attended by a number of close friends and family, including BGU President Prof. Rivka Carmi and Member of Knesset Prof. Avishay Braverman (former BGU president), as well as Howard's daughter Ellen, son-in-law Harvey Malyn and granddaughter Jennifer Kaplan. The highlight of the event was the humorous speech given by Howard who showed that he's still the life and soul of the party.

In November, Prof. Pedro Berliner, director of the Jacob Blaustein Institutes for Desert Research, spoke at the Jewish Academy in San Diego about the Institutes' quest to make the world's deserts more productive. Researchers at BGU's Sede Boquer campus are working to increase the yields of energy, food and water in this typically barren environment.

The Hon. David Siegel, Israel's consul general in



Dr. Howard and Lottie Marcus celebrate with friends and family: Harvey Malyn; BGU President Prof. Rivka Carmi; Member of Knesset Avishay Braverman; Ellen Marcus; and Jennifer Kaplan.



BGU's Prof. Amos Drory, vice president for external affairs; Roberta Robinson; Southwest Regional Director Philip Gomperts; and Dr. Uri Guefen at the Jewish Academy in San Diego.

Los Angeles, was also in attendance. In his remarks, he noted that a night flight over Israel reveals that much of the Galilee and the Negev remains dark and unsettled. In contrast, the areas of central Israel near the urban hubs of Tel Aviv and Jerusalem form a bright arc of light.

This overcrowding in the center of Israel is “not sustainable in the long run,” he said. With the ultimate goal of bringing more people to the Negev, the groundbreaking desert research that happens at BGU is critical to the long-term and sustainable future of Israel.

WASHINGTON/BALTIMORE

Edie and Art Hessel, *Washington D.C. Chapter Chairs*
Keren M. Waranch, *Director*
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HIGHLIGHTING DESERT RESEARCH; HONORING FRANK DYE

The Washington/Baltimore Region enjoyed a variety of programs in the fall and spring. In September, Prof. Pedro Berliner, director of the Jacob Blaustein Institutes for Desert Research, highlighted new research and construction plans for the American Associates Village at Sede Boquer.

He spoke at the law offices of Bryan Cave, LLP to a group of long-time and new AABGU friends, thanks to local board member Daniel Prywes, a partner at the firm. Prof. Berliner also paid a visit to Towson University's Baltimore Hebrew Institute, speaking to a group of Baltimore supporters and college freshman.

In February, the region co-sponsored a symposium with American University's Center for Israel Studies, the Kogod School of Business, and its Environmental Science Department for Greentech Innovation in Israel. It featured BGU Profs. Eilon Adar and Jack Gilron from the Zuckerberg Institute for Water Research,



Ahuva and Frank Dye



Students at Towson University's Baltimore Hebrew Institute listen to Prof. Pedro Berliner.

who discussed “The Politics and Policies of the Green Economy in Israel.”

In March, long-time supporter, national board member and treasured friend Frank Dye was honored at his home in Potomac, Maryland. The evening celebrated all Frank has done for BGU over the years. AABGU will be dedicating an apartment in the American Associates Village at Sede Boquer in Frank's name. Please contact Keren Waranch if you'd like to make a donation in Frank's honor.

Most recently, the region joined with the United Jewish Federation of Tidewater in southern Virginia for a brunch. The guest speaker was Dr. Lior Neshet, head of the Department of Emergency Medicine. BGU offers the only academic program for emergency medicine in Israel, and one of the few worldwide.

SHIR MNUCHIN

THE GIFT OF COMMUNITY



TWENTY-SIX YEAR OLD Shir Mnuchin was raised in a small community in Jerusalem, but it was a year in Alabama that showed her what living in a community is all about.

"I felt what it was like to be an outsider. The people reached out, made me feel part of their world. And once you feel a part of something greater than yourself, you want to give back.

"In Israel you have things in common with those around you but when you're

not automatically part of a community, people have to make room for you. Seeing the effort people put into that in Alabama, I realized this was something I wanted to implement in my life here."

Shir chose BGU in large part because of its reputation for encouraging community involvement. Before college, she had served in the military's education corps, working with newcomers who made *aliyah*. This exposed her to Jewish life in other countries, and she became interested in experiencing life outside Israel. The Jewish Agency for Israel sent her to Alabama, where she spent a year creating programs to explain modern Israel to audiences in churches and universities.

She is now in her third and final year at BGU. She spent the first year of her student life participating in the Lillian and Larry Goodman Open Apartments Program. Shir taught English to middle school girls, training them to initiate their own programs as community leaders.

Today, she is the international relations coordinator for the University's Student Association. Shir acts as student liaison to the Board of Governors, and takes responsibility for facilitating a range of student initiatives. But she does far more. Motivated by her desire to bring international students into the fold, she is creating a host of programs to accomplish that goal.

"When I took the job I thought it was very important to see what other campuses are doing," she says. "I heard about the 'buddy system' and thought it would be great for ours. I tried to see what the needs are here, what was missing. Then I had to recruit people."

She succeeded: about 550 Israeli students and 300 international students registered. The Buddy System now embraces a growing set of programs that aim to put Israeli

and foreign students together. "We hold an orientation day when they get here, showing them around campus, and offering cultural programs and activities like yoga, zumba and spinning."

Her office sponsors Shabbat and weekend programs in the Negev student villages. "This allows students who wouldn't meet in other circumstances to get together," Shir says. People are paired up so they become familiar with each other's language and culture as they get to know each other.

This year has also seen a Super Bowl party, a photography exhibit and an African bead evening. "Creating opportunities for overseas students to take part in and bring them into the community is one of the most amazing things you can do," Shir believes. "You can create a home for them. The program answers both side's needs—so many Israeli students want to meet the foreign ones."

Plans for a diplomacy seminar are in place. Through Stand With Us, a nonprofit that educates the international community about Israel, people with different views are being brought in to speak, giving the foreign students a wider perspective.

Also in the works is a "United Nations model club," where students will represent different countries to debate a topic, and learn to run a campaign in the process. "One of my main goals is to send student delegates to international conferences," Shir says, and she is working with overseas student unions to arrange three-day trip exchanges.

Shir is thrilled with the support she receives from BGU, even from the very top from President Rivka Carmi, with whom she has met. "BGU more than lives up to my expectations. I think our vibrant student life here truly enables students to not only focus on their studies but to be active in the community. You don't hear about such things at other universities. We're very much committed not just to talking, but to making things happen. It's a privilege to be part of such a community."

Unsurprisingly, Shir's future plans include working for a non-governmental organization, perhaps one that combines education and community work. She has ideas for community projects she'd like to run. And she's thinking about an MBA in BGU's new social leadership program, a program similar to the nonprofit management programs in the United States. Next year she will be in Argentina, where she will work on documenting Jewish communities.

"It's all about relationships between people and we're given opportunities every day. That's our gift: We have to give it and receive it." ■

SOCIAL WORKERS

Continued from page 14

In fact, students are practicing their action skills by organizing to speak up for the rights of social workers, and improve salaries and working conditions.

Nevertheless, BGU's Charlotte B. and Jack J. Spitzer Department of Social Work attracts people from many professions who want to be retrained, including scientists and highly paid technical specialists, as well as scores of enthusiastic young men and women.

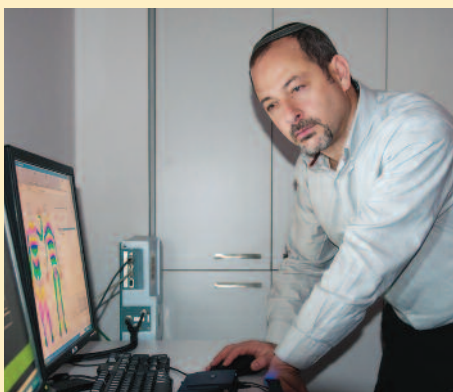
"People want to do something meaningful," Mirsky believes. "And I'm happy we still have young people like that in Israel." ■

PSYCHOLOGY

Continued from page 18

creatively. Once they had followed instructions, it took twice as many trials to think creatively. It challenged our own cognitive flexibility to digest this."

The project helped earn the student a cum laude Ph.D., and left Meiran with an intriguing path to follow. "The implications are enormous—training doctors to follow rules, for example, could impair their ability to come up with novel approaches." And it reinforces the department-wide



Prof. Joshua Lipsitz is conducting an experimental study of emotional factors influencing pain sensitivity. Lipsitz, a practicing clinician specializing in short-term psychotherapy, focuses on interpersonal context. His studies include chronic pain, social anxiety and the use of the telephone to deliver psychotherapy.

belief in the scientist-practitioner model, and the value of promoting creativity by teaching alternative therapies that can be adjusted to individual needs. ■

MEDICAL EDUCATION

Continued from page 20

medical students from the very beginning and integrate the interaction between doctors and nurses and pharmacologists, who often don't talk to each other until hit by real life."

Although a handful of medical schools in the U.S. are exploring simulation teaching centers, BGU's Joyce and Irving Goldman Medical School is the only one in Israel.

Dr. Akiva Esterson graduated from the school last year and is currently an intern at Soroka University Medical Center, while also teaching at the medical school and working with the simulation center. Earlier he received a bachelor's degree in emergency medicine at BGU, so his experience with simulation runs the gamut.

"Of everything I've learned, the hands-on work gave me the most lasting impression and knowledge," he says. Now that he is working as a clinical physician, he's "driven to make it as realistic and advanced as possible and to find more and more ways to use it."

From a teaching viewpoint, Dr. Esterson notes a big advantage in the chance to get immediate feedback from students. "In a class, you can ask 'does everybody understand that?', and they'll all nod. But in practice with simulation, you see the results of what you are teaching, and immediately detect the gaps in knowledge. So it's a dynamic learning process. You see with each specific group what they need more practice with and adapt as you go along."

Students like the experience very much, he says, as do the nurses, paramedics, other medical specialists, and doctors who come to update their skills. "Older experienced people respond just as much as younger ones, whatever their backgrounds.

They all appreciate learning by doing." He notes that when graduates go on to do internships in hospitals elsewhere, they report having the most confidence in their skills, and feel more capable of treating emergencies than their peers.

Transforming medical education takes far more than new equipment, Dr. Nesher stresses. The faculty is working on new curriculum to match. "It's a revolution in medical training because it changes the approach away from learning by text and classroom and then going into the wards. We can't add more time to medical school, so we need to change the curriculum and retrain the teachers to handle the technology, incorporate it and use it to achieve the learning goals."

Happily, nearly all faculty members are very enthusiastic about these developments. With so much data, and so many medical techniques, memorizing information is clearly not enough. "So this gives us the opportunity to sit down and ask, what are our goals? What do we need to know? Then, what do we need to do to get our students there?"

"It fits right in with how this University is geared to new, young thought—and not afraid of change and of pioneering education activities." ■

MASTER OF TRADES

Continued from page 22

policy implications of reducing future contamination, and seeking funding to assess the long-term environmental and health consequences.

What does his extraordinarily broad perspective suggest to him about world prospects?

"I'm macro-pessimistic and micro-optimistic," Yaakov Garb says. "When I look at the big picture I get worried; when I look at the people I work with, I'm hopeful."

He finds BGU a good place to think about all the variables. "It's a vibrant, feisty university. It was the right move for me." ■



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