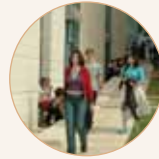


*Being Different
Means Making
a Difference*



Health Sciences News

AUTUMN 2011

Newsletter of the Faculty of Health Sciences at Ben-Gurion University of the Negev

Parting words

Meet the New Dean:
Prof. Gabriel Schreiber

The Ma'agan
Community Cancer
Care Center
Renamed Beit Edy

Health Equity

Genetic Makeup of
the Individual's Tumor
Can Lead to Less Toxic
Treatment

Early Occurrence of
Diabetes and Heart
Disease Can be
Predicted by Body Mass

Reaching the sky -
Aviv project



Prof. Shaul Sofer

After six years as Dean of the Faculty of Health Sciences, I relinquish my position with a great feeling of satisfaction, fulfillment and achievement. This has been a special period in my academic life, which started in many ways as a learning experience and provided me with an opportunity to make lasting friendships with many motivated and devoted faculty members who provided me with invaluable assistance throughout my deanship.

To a great extent, I began my deanship during a period of economic difficulties, which could be described as lean years. However, I invested maximum effort to strengthen the teaching

to the highest possible level with early clinical exposure, to strengthen areas of research in which we excel, including the expansion of community – oriented activities – a subject that is close to my heart.

As to the future, I see all our schools as accomplishing the aspirations set for them, but I also envision a valuable enhancement in the near future, in which I have been greatly involved – a simulation center to support clinical training, which will address some of the challenges posed by teaching modern medicine in a pressured hospital environment, where there is a shortage of physicians and nursing staff. I am deeply grateful to the Joyce and Irving Goldman Family Foundation for their generosity in funding this project. I have also been personally involved in preparing a new curriculum on ethics and medical professionalism – two hot issues today – which will answer ethical questions related to how physicians should deal with complicated issues related to patients, their families, and the community.

There are hosts of initiatives on the agenda to meet the needs of the 21st century. The execution of these programs will further enrich an environment where healthcare training, medical research, and commitment to the community meet – and where achievement is measured in terms of its human value.

I have every confidence that my successor, Prof. Gabriel Schreiber, will continue to carry out the Faculty's vision and mission in a most competent and successful manner and wish him every success.

Last, but not least, I would like to thank our friends around the world for their support and generosity.

S. sofer.

Shaul Sofer, M.D.

Health Sciences

Meet the New Dean: Prof. Gabriel Schreiber



Prof. Gabriel Schreiber

On August 1, 2011, Prof. Gabriel Schreiber became the new Dean of the Faculty of Health Sciences (FOHS). Schreiber, Professor of Psychiatry and Director of Psychiatric Services at Barzilai Medical Center in Ashkelon, has been a member of the Faculty since 1986. He has served as Chairman of the Admissions Committee of the Joyce and Irving Goldman Medical

School and Vice-Dean of Student Affairs, and is Director of the Psychotherapy Program in the Faculty's School for Continuing Education at Barzilai Medical Center.

In his letter to the Dean's Election Committee, in which he presented his view of the future role of the deanship, Schreiber repeatedly quotes David Ben-Gurion, one of whose comments sums up Schreiber's own world view in a nutshell: "A vision that is not coupled with action is a false vision."

Born in Tel Aviv, Schreiber did his undergraduate and graduate studies at Tel Aviv University, earning an M.Sc. in biochemistry and a Ph.D. in neuro-biochemistry in coordination with his M.D. studies. He continued his psychopharmacological research at the National Institutes of Mental Health (NIMH) in Bethesda, Maryland. He later specialized in psychiatry at Beer-Sheva's Mental Health Center and managed the clinic for trauma victims at Soroka University Medical Center.

Together with his wife, Sofia Avissar, Incumbent of the Eugene Hecht Chair in Clinical Pharmacology and associate professor in the Faculty's Department of Pharmacology, Schreiber has long been involved in research in psychobiology. His particular focus is on the potential role of G proteins and beta arrestins in the mechanism of actions of antidepressants and mood stabilizers. G proteins and beta arrestins regulate the transduction of chemical signals inside the cell, a function Schreiber's team believes could be a potential biochemical tool for diagnosing, monitoring, and predicting treatment response in mood disorders. Their research has won several prestigious international honors including the Bennett and Ziskind-Somerfeld Awards of the American Society of Biological Psychiatry and the European Anna Monika Award for Research in Depression.

In spite of his heavy professional schedule, Schreiber also finds time for poetry and literary analysis. His first book, published in 1973, was a collection of poetry entitled *Jeans*. His most recent book, *Simply Complex: A literary-geometric-non-linear journey from Borges to Lacan*, demonstrates that literature, mathematics, physics, philosophy, and psychoanalysis are all governed by similar fractal laws.

As to the enormous challenge ahead in the truly intricate position of FOHS dean, Schreiber says he intends to use his psychoanalytic experience to address the complex issues of doctor-patient relationships, professionalism, and inter-professionalism. "We must emphasize the productive working relationships, not only among the faculty, but also with patients. Medical education should not be limited to hospital medicine; but be expanded by the establishment of educational outpatient clinics in the community."

The self in Anglo-American philosophy is typically described in terms of the individual and autonomy, characteristics that may lead to adoption of narcissistic approaches. The Jewish-French philosopher Emmanuel Levinas reads friendship through the category of hospitality ("Totality and Infinity"), while another Jewish-French philosopher, Jacques Derrida, asks "Is not hospitality an interruption of the self?"

Here we seek another mode of interaction and treatment, based on hospitality as a fundamental category of clinical practice. "We plan to advance the health services in the community by creating a cooperative network among faculty members, directors, and staff of the affiliated medical centers, and the Negev community," says Schreiber.

Schreiber intends to advance interdisciplinary cooperative research between basic and clinical investigators, translational science (a cross-disciplinary research motivated by the need for practical applications that help people), and M.D.-Ph.D. programs. "Enhancement of these programs will strengthen our efforts to recruit young physicians to the Negev," says Schreiber, adding that: "Our efforts will concentrate on cultivating our most important asset – the human resource."

Explaining the task ahead, Schreiber quotes the poet Wallace Stevens:

"From this the poem springs: that we live in a place that is not our own and, much more, not ourselves and hard it is in spite of blazoned days."

ences News

The Ma'agan Community Cancer Care Center Renamed Beit Edy



L-R: Aviva Segev, Sol Freedman, Prof. Pesach Shvartzman and Prof. Rivka Carmi

When Sol Freedman and his late wife Edy first visited Israel in 1969, they fell in love with Beer-Sheva, and especially with BGU. Years later, when the couple decided to establish a support center in Israel for people with cancer, Beer-Sheva was a natural choice.

A cancer survivor herself, Edy wanted to create a self-help program with professional support within a community setting that would provide services not only for the patients but also for their families and friends. This was the beginning of the Ma'agan Community Cancer Care Center (Ma'agan literally means "safe harbor"), founded in 2000 and funded by the Pulier-Freedman Foundation, of which Edy was the president. Ma'agan operates under the auspices of the Faculty's Division of Community Health.

This spring, Ma'agan was renamed Beit Edy ("Edy's House") in memory of Edy Freedman, who passed away earlier this year. The event was timed to coincide with the 41st annual Board of Governors Meeting, as both Sol and Edy were long-time supporters and board members of BGU. Edy was also a former national board member of the American Associates (AABGU). "Edy gave to many projects in the US and Israel, but she always maintained

that Ma'agan was one of those closest to her heart," said Sol, who spoke at the dedication ceremony.

The aim of Beit Edy is to provide social and emotional support to people with cancer, together with their families and friends, as a supplement to conventional medicine. The Center offers support and networking groups, lectures, workshops, and social events in a warm, home-like setting for patients and family members, free of charge.

"Over the years, Ma'agan, located in the city's Ramot neighborhood, has become a crucial community resource for the Negev population. In many parts of the country, centers like this simply don't exist", explained Prof. Pesach Shvartzman, Incumbent of the Mayman Chair in Family Medicine, head of the Department of Family Medicine, and Chairman of Ma'agan.

Edy Freedman once described the rationale behind the Center, "If you meet inside a hospital, you're sick. If you meet in the community, you're learning to live with an illness. This is a disease that doesn't choose where it strikes. It's a family disease, and no one should have to deal with it alone."

Health Sciences

Communicating with the Deaf



For most people, a siren sounding in emergency situations is a clear call to action. However, there's one group of people that such a signal cannot reach – the deaf. Carolina Baruchi, the daughter of two deaf parents, selected a research topic that was close to her heart.

As a student in the preparedness and response track of the master's program in Emergency Medicine at the Faculty, she set out to interview deaf people in southern Israel regarding their experiences during "Operation Cast Lead" in 2009, a time when missiles were falling on the civilian population throughout the South. Her study revealed that the social clubs for the deaf were

closed, leaving the deaf without a community network. Moreover, government social services and the Home Front Command did not know what the deaf community needed, or how to communicate with it.

Soon to complete her master's thesis under the guidance and supervision of Dr. Paula Feder-Bubis, a health sociologist from the Faculty's Department of Health Systems Management, Baruchi intends to continue her work in the field for her Ph.D. studies, which will assist her in devising intervention programs to solve some of the problems she identified.

With the support of the PREPARED Center for Emergency Response Research, headed by Dr. Limor Aharonson-Daniel, Baruchi has already passed on her findings to relevant government authorities such as the Ministry of Social Affairs and Welfare, and The Home Front Command Population Branch. The hope is that this information will help decision makers in formulating plans to help this community in a crisis situation.

Since beginning her research project, Baruchi has turned her academic work into a mission, and, in the spirit of the Faculty, has become an "address" for the deaf community.

In Memory of Amir Abramovich z"l



Amir Abramovich z"l

"Amir, a polite, energetic young guy with a penetrating look and kind smile, belonged to a still-smaller group of 'crazy' gerontologists, who considered rejuvenation not just a beautiful dream but rather the major and realistic goal of gerontology," Prof. Vadim Fraifeld of the Shraga Segal Department of Microbiology and Immunology eulogized Amir Abramovich, an Immunology and Microbiology doctoral student who was killed in a tragic road accident last December.

The tag "Best" accompanied Amir throughout his life. Fraifeld, Amir's academic advisor, listed many of the

awards he earned during his brief lifetime, including the Direct Doctoral Track fellowship for outstanding students from the Kreitman Foundation; a master's of medical science degree, summa cum laude from BGU; first prize for his poster presentation at the 18th Meeting of the Israel Gerontological Society; and, together with Fraifeld's group, the 2010 Bergman Prize from the Israel Gerontological Society for the Study on the Biology of Aging.

"He contributed a great deal to the development of a new concept, the Longevity Network, in search of the common molecular and evolutionary basis of aging and age-related diseases. His 'manifest' was expressed in his article, 'Have We Reached the Point of *in vivo* Rejuvenation?' Those who knew Amir will never forget him," declared Fraifeld.

In recognition of his achievements in the study of the biology of aging, Abramovich was granted a posthumous Ph.D. in Health Sciences at the graduation ceremony held in June 2011. Members of his family, who have established an award for an outstanding young researcher in his name, accepted the degree on Amir's behalf.

May his memory be for a blessing.

ences News

Social Media as a Tool for Saving Lives



Participants of the DSF workshop

Sunday, 23 October 2011, a devastating magnitude 7.2 earthquake struck Turkey, causing havoc, victims, and an urgent need to provide life support medical activities. At the exact same time, leading personnel from the Faculty's Emergency Medicine Department of the Leon and Mathilde Recanati School for Community Health Professions led by Prof. Zvi HaCohen, rector of BGU, were in Petra at a workshop with counterparts from the Jordan Red Crescent (JRC) and the Israeli Magen David Adom, working to enhance a coordinated response to cope with natural disasters. Additional participants were professionals from government ministries including the Ministry of Health and the Ministry of Foreign Affairs, other academic institutions, first responders from both Jordan and Israel, as well as students from Jordan who are studying at BGU to become paramedics.

The workshop was designated to explore the potential utilization of social media as a component of the regional emergency response model. There was a consensus among the participants that the adoption of this tool in

the response to emergencies is crucial and can facilitate communication between the victims, the affected population, the first responders, and local and national governments. "This powerful technology must not be ignored by official decision makers and operational agencies; we must develop a coordinated bilateral plan to use the social media effectively, so that they can be integrated in our response immediately when a disaster occurs," said Dr. Bruria Adini, the academic coordinator of the International Emergency Medicine programs.

This meeting was the fifth gathering of the Development and Strategy Forum (DSF) that steers a unique project designated to assure a coordinated response to disasters in the region. Dr. Mohammed El-Hadid, the president of the JRC who hosted and chaired the workshop, expressed the importance of regional collaboration and stated "We must not miss the opportunity to work together, assure the well-being of the younger generations, and do our utmost to save lives."

A New Book – Home Care for Frail Older Adults

Caring for frail elderly at home has become very common in recent years, recognizing that the best interest of the elderly person is being treated at home in a familiar environment, surrounded by family, along with the need to curtail high public expenditures for acute in-patient care and institutional long-term care. Institutional care is perceived as a last resort.

The new book "Home Care for Frail Older Adults: Issues, Services and Programs", edited by Dr. Esther Iecovich of the Faculty's Department of Sociology of Health and

Gerontology, deals with the system of care for the elderly at different levels and stages of morbidity as well as those who are functionally disabled and need supportive home care services.

The book, written by the best leading experts in Israel in the fields of policy, research, and practice in gerontology, is targeted to those who are involved in or interested in old age: policy makers and professionals as well as older persons and family caregivers who care for their older family members at home.

Health Sciences

Health Equity



Participants of the Mitzpe Ramon Conference for Health Equity in the Negev

The Negev is developing rapidly, but the medical infrastructure must not be left behind. This was the message of the recently held Mitzpe Ramon Conference for Health Equity in the Negev, which was attended by Negev mayors and other officials, as well as health professionals.

The meeting's goal was to address the grave health disparities between the center of the country and the periphery. The conference, the first of its kind, was organized by the Center for Health Policy Research in the Negev, the Faculty's Department of Health Systems Management, with the support and cooperation of the Mitzpe Ramon municipality, the Merage Foundation, and the Negev and Galilee Development Ministry.

In recent years, the Negev has enjoyed an upswing in economic momentum, including the development of advanced industrial zones and technology incubators, as well as academic and cultural activities. "But at the same time, the medical infrastructure has been left behind," says Prof. Nadav Davidovitch, Chair of the Center and organizer of the conference along with Dr. Keren Dopelt and Prof. Gabi Bin Nun of the Department of Health Systems Management. "Health inequalities between the Negev and the center of the country are reflected in various health indicators and access to healthcare. For instance, the Negev has neither facilities for rehabilitation nor hospice care. The nearest rehabilitation beds in the region are in Ashkelon, but even there, their number is

80 percent lower than the national rate and most of them are privately owned."

Although the Soroka University Medical Center and the Faculty are leading institutions with outstanding medical and research personnel, they are staggering under the burden of insufficient facilities for an excessive number of patients. Without appropriate investment, this level of excellence cannot last for long. According to figures provided by the Center for Health Policy Research, the southern district has the fewest emergency rooms, operating rooms, and delivery rooms in the country. The rate of beds per capita and the number of doctors are lower than the national average in all the categories by 30%-70%.

The main impetus of the conference was to move from the descriptive stage to finding practical solutions and to raise the issue on the national and local political agendas. The main recommendations included the need for a governmental decision on the reduction of health inequities as a national priority and the establishment of a health lobby for the Negev, including all relevant actors who will serve as facilitators to promote the implementation of key recommendations that emerged during the conference.

These are only the first steps in a long journey, says Davidovitch. "The Negev has its own unique characteristics and we will continue to lobby for its needs."

Genetics News

Genetic Makeup of the Individual's Tumor Can Lead to Less Toxic Treatment

In a paper recently published in the *Annals of Oncology*, a team led by oncologist Dr. David Geffen describes the impact of the 21-gene Recurrence Score test (*Oncotype DX™*) on the decision to give chemotherapy to 135 breast cancer patients at Soroka University Medical Center.

This is the largest single institution experience reported to date on how much the test influences doctors' treatment recommendations.

The test measures the expression of genes in the individual's breast cancer either from the biopsy or surgery and is used in estrogen receptor positive early breast cancer. Until recently, the decision to add chemotherapy to the relatively mild hormonal therapy was made on the basis of certain features of tumors seen by pathologists under the microscope, as well as measurements of the size of the tumor. Those features are very similar in many patients, which has led to the decision to treat a large number of patients with chemotherapy, despite the fact that only a few actually benefit from it.

Studies where the 21-gene Recurrence Score test was performed on tumors that were removed from patients years ago, and then matched with whether cancer recurred in those patients, have shown that the test results can predict which cancers will benefit from the addition of chemotherapy to hormonal therapy. To date,

research projects on the actual use of the test and its impact on decision making in therapy have been done on only small numbers of patients.

Outside of the U.S., Israel makes the most extensive use of the 21-gene Recurrence Score test (with all four healthcare organizations in Israel covering the expense of the test). According to Faculty researchers, when the test was consistently performed in early stage breast cancer, 25% of the patients had their treatment recommendation changed as a result of the test, with most of the changes advising not to administer chemotherapy. Interestingly, many patients requested chemotherapy even though the test led to a recommendation not to give the potentially difficult therapy.

"We have shown that personalized medicine, with decision-making based on the genetic makeup of the individual's tumor, can lead to less toxic treatment for many patients," write the authors of the study, which was supported in part by the Israel Cancer Association. "The Recurrence Score substantially reduced the number of patients receiving chemotherapy, but we need to improve our patients' understanding of the implications of the test," added Geffen.

The Faculty oncologists are continuing their investigations into the impact of the 21-gene Recurrence Score test on a country-wide scale in cooperation with Clalit Health Services.

The Computational System "ResponseNet"

Cells live in a dynamic environment in which they encounter environmental changes involving metabolic modifications. In an effort to identify and understand these changes, a new ground-breaking webserver system has been developed for researchers in the field of genetics, by a team led by clinical biochemist Esti Yeger-Lotem. As described in a recent issue of *Nucleic Acids Research*, the computational system "ResponseNet" lets researchers analyze large-scale experimental data and thus "substantially expand their understanding of the underlying cellular pathways."

A biological pathway is the set of interactions occurring between a group of proteins that allows a

cell to function. The ResponseNet webserver enables users, who have been limited by analyzing each gene separately, to enter lists of proteins and genes and obtain information linking their data on molecular interactions.

"Everyone can use this server to understand their experimental data," explains Dr. Yeger-Lotem, a Senior Lecturer in Systems Biology of Human Disease in the Department of Clinical Biochemistry. "We're dealing with the question of how people differ in illness and in health. We've developed computational approaches to analyze disease data in order to gain a broad insight into disease mechanisms."

Health Sciences

The Infant Phenomena: Failure to Thrive

A recent study by Faculty researchers has revealed several crucial factors that cause the condition in infants known as “Failure to Thrive” (FTT). This condition is applied to babies whose weight or rate of weight gain is significantly below that of other children of similar age and sex. Such infants are at risk for significant health problems, including greater incidence of infectious diseases, obesity in late childhood, and impaired IQ.

The research, conducted by Esther Hershkovitch, a Ph.D. student, Prof. Ilana Shoham-Vardi, Incumbent of the Isaac and Elizabeth Carlin Chair in Public Health and Epidemiology, and member of the Department of Epidemiology and Health Services Evaluation, and pediatrician Dr. Eli Gazala, examined the accepted hypothesis for the phenomenon, that there is a relationship between FTT and social and behavioral factors related to the relationships between mothers and infants.

In their findings, presented at the recent annual Europediatrics Congress of the European Pediatric Association held in Vienna, the team demonstrated the important contributing factors of the Failure to Thrive condition.

In addition to lower birth weight averages, the FTT infants experienced more difficulties in the transition from liquid to solid food, and a high rate of eating-refusal behavior. Forced feeding and over-feeding were more common among the FTT group. Moreover, FTT mothers were less satisfied with their social support, compared to controls.



The team concluded that the above issues are important risk factors for non-organic FTT. They recommended considering referring infants with an ongoing non-organic FTT to special infant eating disorders clinics and to develop an educational program for nurses and for mothers of young infants and children that addresses eating and feeding problems.

The poster illustrating the study, and presented by Gazala, won the best poster award out of 340 exhibited at the Europediatrics Congress.

Closing a Circle

Noa Brzezinski is a third-year medical student with strong roots in the Faculty. She is the granddaughter of Raquela Prywes, wife of Prof. Moshe Prywes, the legendary Israeli medical educator who founded the Faculty of Health Sciences. Raquela Prywes was famous in her own right. She graduated from the nursing school at Hadassah Hospital prior to the founding of the State of Israel and specialized in midwifery and obstetrics. She is also the “Raquela” of the 1979 bestseller by Ruth Gruber, *Raquela: A Woman of Israel*.

Raquela Prywes married Dr. Arik Brzezinski, a prominent obstetrician. Their son, Prof. Amnon Brzezinski, today heads the Fleischman Women's Health Center, and the Department of Obstetrics and Gynecology at the Hadassah Medical Center in Jerusalem.

After Arik Brzezinski's death, Raquela married her late husband's friend and colleague, then a widower, Prof. Moshe Prywes, who, prior to founding the Faculty of Health Sciences, was the first president of BGU.

Following in her father's and grandparents' footsteps, 26-year-old Noa Brzezinski has also chosen medicine as a career and is actively involved in student affairs at BGU. She's the co-coordinator of Ma'amatz, a program to combat sexual violence among youth, and also teaches first aid to students in the School of Laboratory Medicine. And, keeping the medical profession in the family, in September Noa will marry fellow medical student Isaac Sinai.

ences News

Dialogue of Civilizations

Nine American students from Boston's Northeastern University were recently able to experience critical lessons about providing medical care in the Negev's multicultural society during a month-long exchange program with the Faculty's Nursing Department of the Leon and Mathilde Recanati School for Community Health Professions. The students, mostly psychology, physical therapy, and public health majors, from the Bouvé College of Health Sciences, worked closely with the Faculty's medical professionals in the "Dialogue of Civilizations" program.

According to Prof. Anita Finkelman, a faculty member at Northeastern who led the student group, "Some of these students had never lived abroad before. Their collective realization that we are more alike than we are different is something that is important in medical care, whether you're working in Boston or halfway across the world."

Coordinated by Orly Lieberman, senior member of the Nursing Department, the students had nearly unlimited access to faculty and staff of Faculty of Health Sciences

and all the health agencies of the Negev, where they were able to interact on a daily basis with medical professionals, patients, and their families. One of the students' most rewarding experiences, Finkelman said, was meeting Bedouin women training as nurses in a first-of-its-kind program taking place at the Nursing Department. The American and Bedouin students are now communicating via e-mail and Facebook.

The staff of the Nursing Department provided the main part of the teaching and guidance as well as the recreational activities of the visiting students. They were given first-hand acquaintance with Israeli society through field trips, visits to historical sites, and the spontaneous mingling on the local campus.

In a letter to University President Prof. Rivka Carmi, Finkelman related that "The students were amazed at the whole project: superb lectures, exciting field trips and the warm welcome they received on campus. They said they hadn't expected this type of experience."

Contact Lens Cases Can Lead to Blindness



Contamination, which is common in contact lens storage cases, could lead to loss of vision, according to Faculty researchers Dr. Tova Lifshitz, Incumbent of the Dr. James and Ahuva Desnick Chair in Ophthalmology, and Dr. Assaf Kratz of the Department of Ophthalmology, Soroka University Medical Center.

Presenting their findings at the annual meeting of the American Academy of Ophthalmology, the researchers reported that contact lens storage cases are a potential source and reservoir of bacteria, fungi, and amoebae. They detected at least one pathogen in 20 of 30 storage cases used by 16 people in the study, regardless of the type of contact lens.

Tests of contact lens disinfectant in the storage cases found that *Pseudomonas* – a known cause of severe

corneal infections – was the most common type of pathogen (41 percent), while fungal pathogens accounted for about 3.3 percent of contamination.

Pathogens were identified in all the types of storage solutions examined in the study, while some of the solutions tested positive for pathogens every time they were tested. These pathogens can cause keratitis, an often painful inflammation of the cornea that can lead to vision loss.

"The picture that arises from this study is disturbing," wrote Lifshitz and Kratz. "It seems that the commonly used disinfecting solutions provide little protection from contamination of contact lens storage cases."

The researchers advised that contact lens users closely adhere to contact lens care guidelines, including frequent cleaning and replacing their lens cases regularly in order to prevent contamination.

Findings from this study were published worldwide by the American Academy of Ophthalmology and were received with great interest by many ophthalmologists. A manuscript with the results of the study was recently accepted for publication in the prestigious *Journal of Refractive Surgery*.

Dr. Tzahit Simon-Tuval receives the Excellence in Teaching Award

Not often does a lecturer at the University receive two awards at the same event. At the Rector's Concert marking the end of the 2010-2011 academic year, Dr. Tzahit Simon-Tuval, a member of the Faculty's Department of Health Systems Management, was awarded the 2011 Excellence in Teaching Award, as well as the Prof. Charles Roth Prize for Excellence in Teaching for Young Lecturers.

This was the third consecutive year Simon-Tuval was awarded the Excellence in Teaching Award. She received the awards in recognition of "an outstanding teacher in the field of Health Systems Management, her dedication to instilling motivation for excellence among the new generation of students, and her contribution to the reputation of BGU as a world-class academic institution."

Other Faculty recipients of the 2010-2011 Excellence in Teaching Award were: Prof. Joseph Pliskin, Prof. Avishay Goldberg, and Dr. Asaf Toker of the Department of Health Systems Management; Prof. Michael Priger of the Department of Epidemiology and Health Systems Evaluation; Prof. Michal Hershinkel of the Morphology Department; Prof. Shimon Glick, of The Lord Rabbi Immanuel Jakobovits Center of Jewish Medical Ethics; Dr. Eli Lewis of the Clinical Biochemistry Department; and Dr. Iris Har-Vardi of the Division of Obstetrics and Gynecology.



Prof. Zvi HaCohen and Dr. Tzahit Simon-Tuval

Obesity – A Problem of Large Magnitude



Prof. Eyal Sheiner

Obesity is an ever-growing epidemic and a leading cause of morbidity and mortality in the western world. Obesity has affected populations of all ages and specifically women of reproductive age.

As Professor of Obstetrics and Gynecology, Eyal Sheiner, a member of the Faculty and

a graduate of the 16th class of the Joyce and Irving Goldman Medical School, points out in his latest book, *Obesity in Pregnancy: A Comprehensive Guide*, maternal obesity represents a critical risk factor with serious obstetric implications for both the mother and the fetus. Other BGU faculty members who contributed to the

book are Dr. Avi Harlev, Dr. Eli C. Lewis, Dr. Víctor Novack, Galit Shahaf, and David Ochayon.

Prof. Sheiner, chairman of the Residency Program at Soroka University Medical Center, has investigated and published extensively in the field of high-risk pregnancy. He is the author of more than 280 scientific articles and publications and two books, and is a member of the editorial board of three scientific journals. A number of his frequently cited recent publications regarding pregnancy outcomes following gastric bypass surgery are considered ground-breaking.

Sheiner, who holds a Ph.D. in Epidemiology and Public Health, is also the author of *Textbook of Perinatal Epidemiology*, which has become popular among experts in the field. The book bridges the gaps between the disciplines of epidemiology, obstetrics, and perinatology (also known as maternal-fetal medicine). His upcoming book, to be published by Springer, will deal with the significant problem of bleeding during pregnancy.

ences News

Signaling to the Brain



Prof. Ilya Fleidervish

Brain cells process and transmit information through electrical and chemical signaling. But how does this work? Using what may be the fastest camera in the world, neurophysiologist Prof. Ilya Fleidervish and his team have managed to film that signaling process, which has never

before been observed. This pioneering work using a novel high-speed fluorescence imaging technique was described in a recent article in *Nature Neuroscience*. The imaging technique captures the electrical sparks of axons, or neuro-cells, which transfer information from brain cell to brain cell. The images of these tiny little signaling processes are literally mind-boggling as they are projected onto the screen for the first time ever.

Fleidervish, who immigrated to Israel from Estonia in 1993, did his post-doctoral research at the Faculty's Department of Physiology and Neurobiology. Today, a world-renowned expert in neurophysiology as well as cardiac function, he was recently recruited back to the Faculty from the Hebrew University of Jerusalem.

Fleidervish was born in a Jewish village in the Ukraine. He earned his PhD at Tartu University in Estonia, and then went on to receive an MD from the Research Center for Cardiology, Academy of Sciences, in Moscow. He worked as a physician in Estonia before making aliya.

He has been awarded many awards and research grants, most recently from the Gruss Lipper Foundation and the Grass Faculty Program, which allowed him to carry out his research at a specially set-up lab at the Marine Biological Laboratory in Woods Hole, Massachusetts. It was during those five Cape Cod summers that he produced the research that has led to significant breakthroughs in our understanding of cellular mechanisms of information processing and the brain's circuitry.

Are there practical applications for this groundbreaking research technique? "Einstein once said that 'There's nothing more practical than a good theory'," quips Fleidervish, who then adds "Based on this data we have generated a new theory about how neurons work, which may eventually uncover the causes of, or potentially assist in the search for, cures for such diseases as Alzheimer's, multiple sclerosis, and epilepsy."

"I see BGU as my first home in Israel because I first visited it in 1992. I've seen it develop and expand over the years, and it's really been amazing," says Fleidervish.

Are You Living Near an Out-Patient Clinic?

The farther a patient lives from an urban center and the higher their socioeconomic level, the lower the likelihood of their visiting a specialist clinic, according to Faculty researchers Hasia Lubetzky, head, Occupational Therapy Unit at the Soroka University Medical Center; Prof. Michael Friger, head of the Department of Epidemiology and Health Services Evaluation; and Prof. Shifra Shvarts of the Center for Medical Education; together with Lora Warshawsky-Livne from the Department of Logistics at Sapir Academic College.

The southern region encompasses over 50% of Israel's total land area (12,945 km²) but is populated by only 8% of the total population, about half a million persons. The inhabitants are very heterogeneous, including long-time residents of Israel, new immigrants from the former USSR, and Ethiopia, and Bedouin. The researchers monitored patient populations living in the peripheral communities in the south who visited various out-patient

specialist clinics in Beer-Sheva, the main city in the south, from 2000 to 2005. Results, published recently in the journal *Health Policy*, show that the distance from Beer-Sheva and the socioeconomic level of the patient's town has a negative correlation with the number of visits.

A possible explanation for this result is that people living in a town with a higher socio-economic level use health services in an educated manner, and manage a life style that promotes health – including diet, physical activity, and use of advanced health services that are not included in the public health system.

The researchers concluded: "In order to be effective, that is, available and accessible to the population, a health system in the periphery must develop programs that take into consideration the needs of specific localities, such as distance to the health services, and the patient's socioeconomic level."

Health Sciences

Bracha Ramot Prize for Excellence

Three young physicians, Dr. Hanna Krymko of the Division of Pediatrics, Dr. Anton Osintsov of the Division of Surgery, and Dr. Eli Rosenberg of the Division of Internal Medicine, were unanimously awarded the 2011 Prize in Doctor-Patient Communications in memory of Prof. Bracha Ramot, a former member of the IARC Committee and devoted friend of the Faculty of Health Sciences. The award was presented by Prof. Shaul Sofer, Dean of the Faculty of Health Sciences, at the recent Faculty Day gathering.

To emphasize the importance of the doctor-patient relationship, the recipients together with faculty

members participated in the play "Coming from There", dealing with the interaction of elderly sick people with those around them: family, caregivers, medical and social factors, and the right to die with dignity. The show is based on a real story.

The award, established as an endowment fund by the Joyce and Irving Goldman Family Foundation, was given in recognition of their extreme dedication and devotion to patients, and in acknowledgment of their exceptional interpersonal and communication skills, which imbues all those who are privileged to cross their path with the true meaning of a devoted physician.

Bentwich's "Tikkun Olam"



Prof. Zvi Bentwich

It was the realization in 1991, following the mass immigration to Israel of Ethiopian Jews, that a high percentage of them were afflicted with parasitic diseases as well as HIV, which sealed Prof. Zvi Bentwich's determination to change the situation. "I promised myself then that I would be committed to change what seemed to the Ethiopians to be inevitable - to alleviate their suffering because it was so simple to do so." Prof. Bentwich is an internationally eminent immunologist who heads the Faculty's Center for Emerging Tropical Diseases and AIDS (CEMTA).

Bentwich has visited Ethiopia countless times, leading the CEMTA team to eradicate Neglected Tropical Diseases (NTDs) in Ethiopia. The program, carried out together with MASHAV (Israel's Agency for International Development

and Cooperation), combines mass drug administration with health education, water sanitation, and the active participation of local communities and the government.

In an ambitious de-worming project to eliminate Schistosomiasis, or bilharzia, the parasitic disease caused by trematode flatworms, CEMTA has achieved a significant and sustained reduction in the prevalence of the infection and other NTDs.

"Many people, my family included, often ask me what I get out of this unpaid work," comments Bentwich, who last year was the recipient of

the Health Ministry's Lifetime Achievement Award for his significant contribution as a physician and researcher. "My answer has always been 'The reward and the commitment I get from the children and adults we treat who have carried these diseases'."

As a result of its impressive achievements, CEMTA has become an official partner to the Ethiopian Federal Ministry of Health and the World Health Organization (WHO), and this past spring carried out a joint de-worming campaign with the William J. Clinton Foundation.

"This is a good example of how Israel can help people attack major health problems outside of Israel, and contribute to a better world in the spirit of Tikkun Olam," says Bentwich.

ences News

Seeing Equal Human Worth Beyond Borders



MSIH student during an internship in Africa

During the time Isa Abdula lived in Darfur, Sudan, all the men in his community over the age of 15 were murdered. Isa survived. In 2010 at age 23, Isa fled. Paying Bedouin smugglers to take him through the Sinai desert, he made his way to Israel. While attempting to scale the barrier fence between Israel and Egypt, an Egyptian soldier spotted Isa and shot him in the stomach. The bullet hit a vertebra and damaged a spinal nerve, leaving Isa paralyzed in his left leg and in critical condition.

An Israeli soldier witnessed the shooting and radioed for help. Isa was airlifted to the Soroka University Medical Center and was eventually released to a temporary care facility for the homeless, without any friends, family, or health insurance. It was there that volunteers from the Faculty's Medical School for International Health (MSIH), together with other student volunteers, stepped in.

The MSIH students helped Isa with physical therapy, showering, administering medications and dressing. They

showed Isa that there were people in his life that cared about him and his recovery. Isa's story is an example of one of a wide range of community-based and volunteer-focused activities in which MSIH students are engaged, either in small groups or individually during their four years in Israel.

MSIH, the ground-breaking collaboration between BGU and the Columbia University Medical Center, is the only medical school in the world established to train future doctors to provide healthcare for underserved populations throughout the globe. During their last year of clinical rotations in Israel, the students have the opportunity to expand their education elsewhere – serving in two-month internships in Africa, Asia and in other areas around the world.

As physician and Pulitzer Prize winning journalist Dr. Sheri Fink told the 2010 graduates of MSIH: "You've had an education that has prepared you to pursue a career in medicine that sees equal human worth beyond borders, front lines, skin shades, social stations and religions."

40th Anniversary of the Hippocratic Oath Ceremony

Prof. Haim Belmaker, Incumbent of the Hoffer/Vickar Chair in Psychiatry and a psychiatrist at the Beer-Sheva Mental Health Center, and Dr. Ilana Belmaker of the Department of Family Medicine and Regional Medical Officer of the Ministry of Health, recently held a reception in honor of the 40th anniversary of their Hippocratic Oath ceremony.

Prof. Shimon Glick, Dean of the Faculty at the time the couple joined the faculty, and Dr. Ibe Turek, the Regional

Medical Officer when Dr. Ilana Belmaker joined the Ministry of Health, spoke at the reception. Prof. Arik Shalev, outgoing chairman of the Department of Psychiatry at Hadassah Hebrew University School of Medicine, spoke about the future of academic psychiatry, and Prof. Gabriel Gurman, a past Vice Dean of the Faculty, and Director of Anesthesiology for Electro-convulsive therapy treatment at the Beer-Sheva Mental Health Center for over 20 years, spoke about the development of psychopharmacology research in Beer-Sheva.

Health Sciences

Columbia, BGU Nursing Schools Forge Link



L-R: Dr. Ilana Livshiz-Riven, Prof. Jacob Gopas, Dr. Pnina Romem, Prof. Jennifer Smith, Prof. Bobbie Berkowitz, Prof. Rivka Carmi, Prof. Elaine Larson and Orly Lieberman

This past summer ranking faculty members from the Columbia University School of Nursing came to Beer-Sheva to meet with their counterparts at the Ben-Gurion University of the Negev's Faculty of Health Sciences to discuss future collaborative activities in academia and research. Among the potential areas discussed were the development of PhD and Doctor of Nursing Practice (DNP) programs, research on infection control and curriculum development, as well as a possible exchange of faculty and students.

The cooperative project was the brainchild of Dr. Ilana Livshiz-Riven, Director of the MN program in the Department of Nursing of the Leon and Mathilde Recanati School for Community Health Professions, who recently gave a lecture to the Columbia School of Nursing faculty. The visiting team

from Columbia was led by School of Nursing Dean Prof. Bobbie Berkowitz, with two of her associate deans.

A Memorandum of Understanding between the two nursing schools will be signed in the coming months. This would be the second medical cooperative endeavor between BGU and Columbia University Medical Center. The Medical School for International Health (MSIH), a joint BGU-Columbia Medical School program, brings more than 45 foreign students a year to study medicine with a global health perspective.

"Columbia has been designated as a World Health Organization Collaborating Center whose mandate is to seek out collaborations all over the world," says Livshiz-Riven. "So working together with BGU is a natural and promising idea."

Award for Academic Excellence in Endocrinology

The 2011 Outstanding Achievement Award for Academic Excellence in Endocrinology was given to Yuval Glick, a sixth-year student at the Joyce and Irving Goldman Medical School. The award was presented Dean Prof. Shaul Sofer, Incumbent of the Lubner Family Chair in Child Health, Associate Dean Prof. Pablo Yagupsky, and the endocrinology clerkship coordinator and the initiator of the prize, Dr. Johnathan Arbelle. Yuval received a free membership in the American Endocrinology Society, a

subscription to *Endocrinology Reviews*, and a certificate. The Joyce and Irving Goldman Medical School, together with more than 200 institutes worldwide, participates in this prestigious project, which aims to support a medical Academic Excellence in Endocrinology student who has shown exceptional ability and interest in endocrinology. It encourages outstanding students to pursue careers in endocrinology and related fields in medicine and basic science.

ences News

Early Occurrence of Diabetes and Heart Disease Can be Predicted by Body Mass

A new study shows that the occurrence of diabetes and heart disease in young adults can be predicted by body mass index in adolescence. The risk of diabetes has been associated primarily with increased body mass index among adults aged 30–45. (BMI is one's weight in kilograms divided by the squared height in meters.) However, the study's findings, published recently in the prestigious *New England Journal of Medicine*, shows that BMI measured in adolescents can also predict risk of early type 2 diabetes and heart disease. Remarkably, this association was observed even with BMI values that are well within the range currently considered normal.

The research team was led by the Faculty's Profs. Iris Shai of the S. Daniel Abraham International Center for Health and Nutrition and Assaf Rudich of the Department of Clinical Biochemistry, in partnership with Dr. Amir Tirosh of Sheba-Tel Hashomer Medical Center's Talpiot program and of Harvard Medical School's Brigham and Women's Hospital, along with researchers from the Israeli Defense Force (IDF) Medical Corps.

This large study, which followed 37,000 IDF career personnel starting at age 17, found that both diabetes and coronary heart disease risk are associated with elevated BMI both in adolescence as well as in adulthood. Yet for heart disease, but not for diabetes, adolescent BMI was an independent risk factor distinct from that associated with elevated BMI in adulthood. The conclusion, say the researchers, is a clear argument for early intervention to promote healthy lifestyle habits, even during childhood, as a strategy to prevent heart disease.

"Previous studies did not unequivocally confirm the association between pre-adulthood BMI and diseases in early adulthood," says Prof. Rudich, "although obese children are more likely to become obese adults. This study is significant because it demonstrates that the association exists significantly within the currently considered normal values for BMI, having a distinct effect on two diseases occurring in early adulthood – an age group that is frequently neglected."

Workplace Noise Affects the Quality of Sleep



Prolonged exposure to loud workplace noise may affect the quality of sleep in workers with occupational-related hearing loss, according to a new study by Faculty researchers.

In a recently published article in the journal *Sleep*, Tsafnat Test, a medical student at the Joyce and Irving Goldman Medical School, who carried out the study as part of her B.Sc. thesis, supervised by Prof. Ilana Shoham-Vardi, incumbent of the Isaac and Elizabeth Carlin Chair in Public Health and Epidemiology and of the Department

of Epidemiology and Health Systems Evaluation and other scientists, compared the sleep quality of 298 workers occupationally exposed to harmful noise. The participants underwent an audiometric examination, a validated Mini Sleep Questionnaire performed by a nurse as part of the National Workers Health Supervision program, to measure their quality of sleep.

"We were able to compare sleep quality between groups exposed to identical harmful noise at the same workplace, who differed only in terms of hearing loss," Test says, explaining that workers who suffered from hearing loss were generally older and had been exposed longer.

The researchers explored various elements of sleep, including insomnia; waking up too early or during the night; excessive daytime sleepiness or falling asleep during daytime hours; snoring; and excessive sleep movement.

Although tinnitus, a ringing in the ears, was the main disruptive factor, hearing impairment among workers occupationally exposed to harmful noise independently contributed to sleep impairment, especially insomnia, regardless of age and years of exposure," concluded Test.

Reaching the sky - Aviv project



Faculty medical students with children from the "Aviv" outreach project

Twenty years ago, at the end of May 1991, the last of Ethiopia's entire 2,000-year-old Jewish community was brought to Israel in a dramatic airlift. In Operation Solomon, 14,400 Ethiopian Jews were flown out of Ethiopia in the midst of a civil war. It was a significant landmark as an earlier covert operation in 1984 (Operation Moses) was brought to an abrupt halt when news of the plan was leaked to the media, and Jews were no longer allowed to leave the country.

But once the heroic journey to Israel was made, a challenging reality awaited the new immigrants: a new culture, language, and way of life. Today the Ethiopian-Israeli community numbers about 120,000. Despite all the integration programs – absorption centers, intensive language classes, work counseling, etc. – the task of integrating immigrants from the developing world into a competitive, Western economy has been less than successful. Poverty, unemployment, and juvenile delinquency are far higher among the Ethiopian community than the general population in Israel.

A project initiated and run by the Faculty's medical students is trying to make a small but significant difference in the lives of Ethiopian youngsters. Now in its fourth year, the Aviv Project began when Aviv Talmon, then in his second year at the Joyce and Irving Goldman Medical School, went to the Haruv Absorption Center in Beer-Sheva and asked the center's guidance counselor to "Give me your most troubled kids." The officials at the Center didn't take Talmon seriously at first, but they soon realized they were dealing with a very motivated young man.

That first year Talmon began his project by showing the youngsters around the University campus, organizing a "laboratory day" for them, and teaching them Hebrew.

Aviv's enthusiasm spread to other students in the Faculty. Together with the Center's staff, he was able to match

Faculty students with the youngsters in a kind of "big brother" relationship. The pairs met regularly for Hebrew lessons and social activities. With help from interested local donors, Talmon was able to organize annual trips.

Today, depending on the time students have to spare, they tutor the youngsters on a weekly basis and run monthly classes. Some of the activities include: distributing food packages to needy elderly on Jewish holidays, Lag b'Omer campfire parties, and preparation for Bar Mitzvahs.

Recently, one of the more difficult kids who was tutored by Talmon himself got selected to join an elite army unit in the Paratroopers Brigade. "No matter where these kids came from, all they need is someone to believe in them, and they can reach the skies," says Talmon.

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