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REPORT BY THE RECTOR



## ACADEMIC DEVELOPMENTS

### VISION STATEMENT

I hereby present to you my final report as, after serving as Rector of the Hebrew University of Jerusalem for two terms, I will be stepping down at the end of September 2008 and shall return to my Faculty and lab to devote my time exclusively to my research in horticulture.

I want to begin by saying that I look with satisfaction and pride upon these seven years that I have served my University as Rector, and believe that the University has been changed during this period despite the vicious terror attack on July 31, 2002 on Mt. Scopus with the murder of nine innocent people and wounding of over one hundred others; the severe budget cuts; war; students' strike; faculty strike, and the malicious attempts of boycotting Israeli academia and academicians. Due to its excellent staff and students, the Hebrew University has managed to overcome these and other hardships and has taken a quantum academic leap forward in the course of these years. Around the world, the Hebrew University is a trademark both for the State of Israel and for the Jewish people.

In May 2001, before I began my first term as Rector, I submitted to my peers a brief outline of the points I believed that the University would have to deal with in order to maintain and further its excellence on the level of the best universities in the world, to improve on structure, and to enhance faculty satisfaction. These were:

- Innovation and improvement in research and teaching requires cooperation and integration between disciplines: thus there is a need for reorganization of existing programs and units and opening new programs, many of them interdisciplinary.
- Encouraging students' excellence – can be achieved through a system of merit scholarships providing incentive to attract the best candidates and improve the results in studies and research.
- Absorption of excellent young faculty is the first step in building the future of every academic unit in particular and the University in general. This requires meticulous choice of new staff and rational allocation. Process of appointments and promotions - were impossibly lengthy, and badly needed revision and improved transparency.
- Gender ratio at the University, both among graduate students and faculty was imbalanced and required immediate attention.

At the end of my term I am happy to say that the University adopted and implemented the proposed changes or has made significant progress in all these action points, though some (e.g., gender equality among faculty) require very long terms to complete.

I would like to briefly review some of the innovations made during the seven years of my terms as Rector in these areas, all with the cooperation of the President of the University, Prof. Menachem Magidor, the Deans, and faculty.

### **Quality Assurance**

Monitoring as means for quality assurance - As a part of its commitment to academic excellence in an increasingly global environment, for the last four years the Hebrew University has hosted regular visits by international committees to its academic units and research centers (See page 12). The Reports by the internationally renowned scholars together with the academic unit's reaction are discussed by the Committee for Academic Policy [[http://www.huji.ac.il/huji/eng/unit\\_bakara\\_e.htm](http://www.huji.ac.il/huji/eng/unit_bakara_e.htm)] and the resolutions implemented. Hence, the School of Library, Archive and Information Studies was closed down, whereas successful programs such as Philosophy, Economics and Political Science [<http://pep.huji.ac.il/homehb.html>] were granted additional funding means and positions.

### **Organizational and Structural changes, and establishment of new interdisciplinary programs:**

A School of History was established to serve as an organizational framework for combined academic effort and collaboration among scholars researching and teaching the different fields of history. [<http://www.hum.huji.ac.il/units.php?cat=1272&incat=0>]

A School of Literature was established as a broad and interdisciplinary organizational framework to coordinate literature studies in the Faculty of Humanities and encourage the exchange of information and cooperation between the departments, the researchers and students of various fields of literature. [<http://www.hum.huji.ac.il/units.php?cat=1359&incat=0>]

A Center for Environmental Studies has been established, bringing together researchers and students from six Faculties thus encouraging dialogue and joint research between scholars in the fields of economics, law, geography, agriculture, medicine, earth sciences, humanities, and biological disciplines.

The Center for Neural Computation serves as an interdisciplinary unit for the study of the brain, and trains students to address various aspects of mode of the brain's structure, performance and activity. This rapidly growing field at the forefront of the sciences and technology brings together scholars from a variety of disciplines, including psychology, brain studies, physics, computer sciences, neurobiology, molecular biology and more. This Center received a citation twice by the European Union (in 2000 and in 2004) as a "Center of Excellence". [<http://icnc.huji.ac.il/>]

In the Faculty of Agricultural, Food and Environmental Sciences the amalgamation of the three Plant Science Departments into the Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture turned out to be a great success [<http://departments.agri.huji.ac.il/plantscience/>]. (see page 49). This move set as a model for other University units, in and outside the Faculty. A few examples follow:

The four new thrusts currently under realization, i.e., the implementation of the Gager committee and restructuring of the Faculty of Humanities already on its way (see page 35); the conceptual and restructuring of the Faculty of Agriculture (see page 49) the construction of the Brain Center and the establishment of the IMR (see page 45).

In the Faculty of Medicine the Institute of Microbiology and the Institute of Health Sciences merged to form the Institute of Medical Research (IMR). This enables young innovators and internationally renowned leaders to work together across disciplines and unite their areas of expertise to achieve a deeper understanding of the human body and its genetic makeup. In the new IMR these insights are leading to life-saving discoveries protective of human health, now and in future years. [[http://medicine.huji.ac.il/UnitDetails\\_Heb.aspx?UnitID=12](http://medicine.huji.ac.il/UnitDetails_Heb.aspx?UnitID=12)]

In the Faculty of Dental Medicine eight departments were amalgamated into the Institute of Dental Sciences providing enhancement of mutual interests concerning teaching, research of the different dental scientific issues, lab spaces and shared research instruments. [<http://dental.huji.ac.il/newEsite/departments/institute/instituteindex.html>] (see page 47)

In the Faculty of Social Sciences the Department of Demography merged with Sociology and Anthropology in an effort to increase efficiency and exposure to undergraduate students with an increase of interaction between students specializing in sociology, anthropology, and demography. [<http://sociology.huji.ac.il/>]

In the Faculty of Science, the School of Applied Science closed down and the group of applied chemists joined the Institute of Chemistry [<http://chemistry.huji.ac.il/>] and

those of applied physicists joined the Rachel and Selim Benin School of Computer Science and Engineering, thus becoming the founding unit for the establishment of teaching and research programs in specialized branches of computer engineering, such as in microelectronics and optoelectronics. [<http://www.cs.huji.ac.il/site/index.php>]. Water scientists joined the Department of Soil and Water Sciences thus strengthening the research and teaching capacities at the Faculty of Agricultural, Food and Environmental Quality Sciences and the University's strength in water sciences. [<http://departments.agri.huji.ac.il/soils/>]

The Federmann School of Public Policy and Governance combines interdisciplinary research with degree studies to contribute to the enrichment and professional training of senior officials in the central civil service, in the local governments and in other public bodies. [<http://public-policy.huji.ac.il/>]

Additional new teaching and research Centers that have been established include: The Swiss Center for Conflict Research Management and Resolution aimed at training students in this specific field [<http://crmr.huji.ac.il/>], The Gilo Center for Citizenship, Democracy and Civic Education designed to upgrade civic education in research and practice in academia and in the public school system [<http://gilocenter.huji.ac.il/>]; Scholion Interdisciplinary Research Center in Jewish Studies which conducts a range of multiyear research activities on an interdisciplinary basis [<http://scholion.huji.ac.il/>]; The Leonid Nevzlin Research Center for Russian and East European Jewry to encourage multi-disciplinary research tracks in Jewish cultural heritage in Russian and Eastern Europe [<http://nevzlin.huji.ac.il/HOME.HTML>]; and A Unit for Nano-Characterization which provides the "eyes" that researchers need to identify and characterize the nanometric structures they have created [<http://nanoscience.huji.ac.il/unc/index.htm>].

The European Forum was created in 2004 uniting all six European Centers (Helmut Kohl Institute for European Studies, Center for Austrian Studies, Marjorie Mayrock Center for Russian, Euro-Asian and East-European Research, Paul Demarais Center for the Study of French Culture, Center for the Study of Italian Culture) under one umbrella thus creating a powerful research and teaching hub specializing in various aspects of European studies without losing the identity and tasks of each of the individual centers [<http://www.ef.huji.ac.il/>]. At the beginning of this academic year, a new Center for German Studies has been added to the Forum following a successful participation in the competition generated by a tender offered by the DAAD (the German Academic Exchange Service) to all Israeli research universities in 2006. This new center for Modern German Studies will play a major role in furthering the scientific and cultural ties and understanding between Israel and Germany [<http://www.cgs.huji.ac.il/>].

In the past six years, a wealth of new programs have been introduced, many of them interdisciplinary in nature. These include: Specialization in Cultural Studies; Specialization in European Studies; Learning Disabilities Program and Clinic Education; Teachers' Training Program; Executive Program in Public Policy; Official Statistics; Biotechnology; Law and Social Work; Law and Environmental Studies; Specialization in Intellectual Property and High Technology; Judaism as Culture; Rational Sciences; Computational Biology; Proteomics; Program in Military and Security Policy; Ethics of Science; A joint master's degree program in Animal Sciences and Veterinary Science; Chemistry and Biology; Management of Nonprofit and Community Organizations; Social Work and Criminology; Clinical Pharmacy; Community Leadership and Philanthropy; Climate, Atmosphere and Oceanography; Nature Conservation and Management; Agriculture and Business Administration; Agricultural Economics & Management with a Specialization in Biotechnology; and many more.

### **Social Involvement and Academia**

The University involvement in society deepened and became stronger than ever.

The 'Sheleg' experimental program was launched to provide a second opportunity for high school graduates from the peripheral areas who were not able to realize their intellectual potential and achieve high enough matriculation scores for admission to the Hebrew University. The results were quite encouraging with more than 75% completing their university studies.

The Lehava program for high school youth from underprivileged strata of society in neighborhoods not far from the University's campuses initiates interest in and promotes academic education among talented and motivated high school pupils from this group. A survey taken a few years after their participation in this program found 45% to 70% of the Lehava graduates studying at a university, many of them at the Hebrew University.

The Belmonte Science Laboratories Center and the Joseph Meyerhoff Center for Youth Advanced Studies provide an opportunity of high level teaching programs specially developed by Hebrew University academic staff for high school students from all over Israel, enabling them to perform scientific experiments thus initiating interest in and promoting attraction to the sciences. The pupils are guided by their teachers assisted by Hebrew University research students and use state of the art equipment. [<http://belmonte.org.il/heb>]

Programs were established for outstanding youth from the peripheral areas to acquire an academic education prior to their army service, the intention being to raise the interest in academic studies in these areas and to raise the confidence of the youth in their ability to attain such studies.

The University operates a program of “affirmative action” for candidates from the periphery with up to 0.5 point below the threshold of admission. All Faculties and all disciplines accept an additional 5% of the number of students accepted, above the capping set by the Planning and Budgeting Committee so that their acceptance does not come at the account of students who meet the regular requirements. This provides for students from the periphery areas, where the high school education was not at the highest level, the opportunity to enroll at the top university. This program of affirmative action results in about 200 additional students coming to study at the Hebrew University.

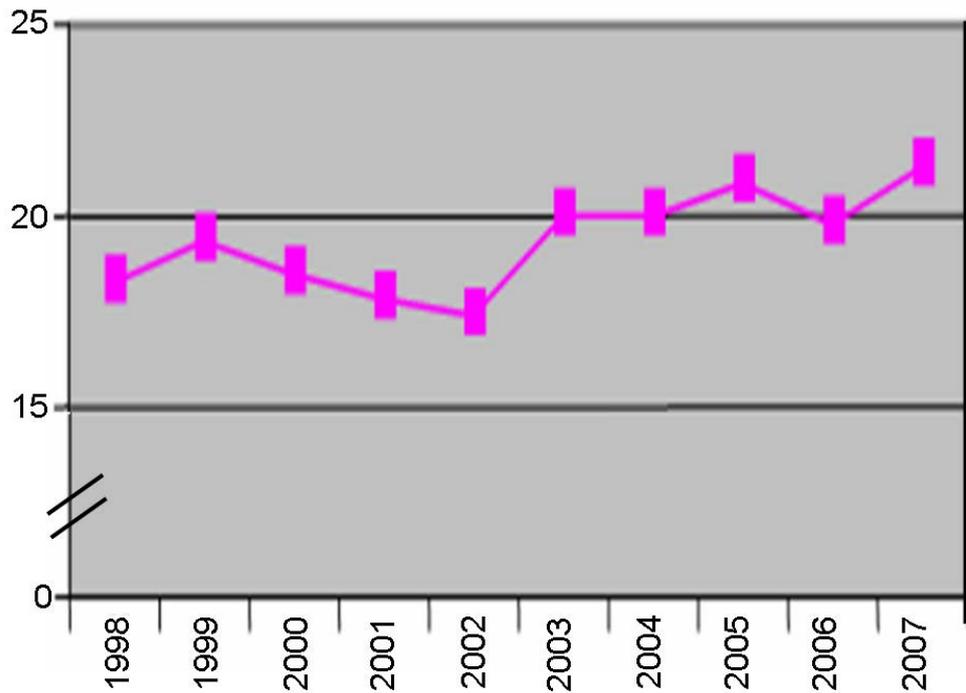
The Atidim program for training teachers in sciences and in English, in collaboration with the School of Education commenced in 2004. The unique program at Hebrew University aims at training skillful professional teachers for the periphery thus improving standards of education and serving as role models for local youth. Concomitantly, Hebrew University opened the program for training post-army Cadets from the periphery for the Public service, and another program “the Atidim for industry” was established to nurture future leaders in the advancement of industry in the peripheral areas. [<http://public-policy.huji.ac.il/eng/atidim.asp>]

The University also initiated many programs geared to help sectors in society, including an outreach Nutrition Education Program for immigrants from Ethiopia by the School of Nutritional Science in the Faculty of Agriculture, and a Community Intervention program for underprivileged new immigrants from the former Soviet Union. The Faculty of Law and the School of Social Work and Social Welfare carry out numerous programs designed to help underprivileged sectors in the community, and the Faculty of Dental Medicine provides some dental care (see page 47) to the people of Sderot (the town blitzed daily by missiles from Gaza for the past seven consecutive years).

The Youth Science Center of the Hebrew University of Jerusalem, hosted children from the town of Sderot for a day of science fun-events on the Edmond J. Safra Campus of the University. The program included experiences involving chemistry, emergency medicine, weather forecasting and astronomy. The activity was led by graduate students at the university. The Youth Science Center hopes to have many returns of this program and host more students from Sderot, giving them a brief respite from the everyday pressures which they experience.

The Revivim Forum for Education hosted a group of twelfth graders from the area neighboring Gaza. The visit included a tour of the campus; a general presentation on the Revivim program for training teachers to teach Jewish subjects in secular schools; a lecture and then study groups.

The University is now considering adopting a number of alternate channels for admission, including an additional one for students from the periphery areas. This new channel would provide for admission of some 5-10 of the most outstanding students from periphery high schools. Selection and admission will be based on the Ministry of Education's standards of excellence and personal recommendations by the school principal. In some Departments, e.g., Medicine and Dental Medicine, where the admission criteria are far more complex, additional selection means apply.



**Change in % HUJI students from the periphery at the undergraduate level**

This graph shows a gradual increase in the percentage of students from the periphery studying at the Hebrew University. Despite all the inherent and objective difficulties, the University is doing much to increase its outreach to have more students from these areas.

## CHANGES IN STRUCTURE AND BY-LAWS

### Major Change in the Composition of the Senate

In 2000 the Public Committee for Review of the Organizational Structure of the Institutions of Higher Education, headed by Justice (retired) Yaacov Maltz submitted its recommendations for major changes in the organizational structure of the universities. It concluded that the existing “size, composition and work patterns of the Senate did not allow for efficient administration of the academic matters at the university”. It recommended that “automatic membership in the Senate be cancelled and that the Senate should be composed of academic office holders *ex-officio*, selected representatives of the academic staff and a representative of the students”.

Following extensive internal discussions, in 2004 the University’s Constitution and General Statutes were amended changing the composition of the Senate from some 700 automatic members to some 90 elected and *ex officio* members. Also the hierarchical and governing structures of the University were changed, as well as election procedures and terms of service of Officers of the University. [[http://www.huji.ac.il/huji/univer\\_rules1.htm](http://www.huji.ac.il/huji/univer_rules1.htm)]

### Ethics

With the proliferation of different standards, there is a world-wide trend to codify all rules regarding ethics in research. A university-wide committee headed by Prof. Celia Fassberg is currently preparing a **new and comprehensive Code of Ethics in Research** that would deal with all issues including: conflict of interest, plagiarism, piracy, falsification of data, etc.

### Disciplinary Statutes of the Students

Following a thorough review of the issue of student discipline, numerous changes were made in the Disciplinary Statutes with a view to expediting the disciplinary process, increasing the independence of the Disciplinary Committee itself and the prosecutor; preventing punishment without due process, and providing appropriate protection for the rights of the accused. Some major changes included: granting a certain judging authority to the Deans; the mandatory minimum punishment for cheating on exams or papers was decreased; and in particularly severe cases, the students have been granted the right to be represented by a lawyer in the disciplinary proceedings. [<http://sites.huji.ac.il/mazkirut/student.html>]

## **Disciplinary Statutes of the Academic Staff**

The Disciplinary Statutes for Academic Employees of the Hebrew University were amended to include retirees that continue to work at the University or referring to an offense carried out during the course of the person's work at the University. The amendments also limit the period during which disciplinary action may be taken. [<http://sites.huji.ac.il/mazkirut/mishmaat.html>]

## **Academic Affairs**

Nomination and Promotion: The University's Senate adopted new bylaws for the process of academic recruitment and promotion thereby providing a unified mechanism for meticulous and fair review of academic qualities and achievements of candidates, also shortening and accelerating the process with more efficient and appropriate procedures. Software programs were set up providing high visibility to the procedures of academic appointment and promotion. [[http://sites.huji.ac.il/mazkirut/tafrit\\_minuyim.html](http://sites.huji.ac.il/mazkirut/tafrit_minuyim.html)]

"Of the Practice" track: The wide range of activities that take place in academic life requires and benefits from the services of experienced people with senior professional stature and teaching abilities. A Committee headed by Prof. Nachman Ben-Yehuda was appointed to check the requirements, definition and demands of the academic tracks other than the regular one. This review led to the following resolution by the Standing Committee:

To open a new track for scholars and professionals with deep practical experience, entitled "Of the Practice", whose aims are:

- To increase flexibility by hiring professionals in various part-time to full-time academic appointments.
- To create criteria for appointments and promotions according to disciplinary activities and requirements.
- To create an Appointment Committee particular to this track.
- To limit the number of appointments to 10% (up to 20%, rarely) of all positions in the department.

Advanced studies: A committee was established to review the existing situation with regard to research studies and propose an optimal structure for organizing masters and doctoral studies at the University. The main recommendation of that committee was that the better students who choose the research track at the University should proceed mainly through the direct track for a doctorate. Another recommendation was to aim at setting up

graduate honors programs that would provide outstanding students with fellowships and enable those students to participate in special activities, workshops, team-talk sessions, seminars, guest lectures and more. The faculty of Humanities has already taken the first steps in this direction and forty outstanding doctoral students are participating in this honors program.

## **ACADEMIC REVIEW**

The Hebrew University has adopted the review process as a deliberate and systematic policy of proper administration. Review and evaluation at regular intervals are essential in order to prevent stagnation and to allow for improvement, rectification of problems, renovation and adequate use of available resources. Under the Office of the Rector, the person responsible for academic evaluation at the Hebrew University is the Vice-Rector, Prof. Miri Gur-Arye, assisted by Prof. Eli Friedman in the experimental faculties and Prof. Jacob Metzger in the non-experimental faculties.

The review process relies on external committees in order to ensure a world class professional approach. The mandate of the Committees is open-ended, and the Committee is asked to examine all aspects of the reviewed unit or units of similar disciplines: infrastructure, administrative personnel, curricula, students' quality, achievements and satisfaction, and the activity of faculty members in research, teaching, supervision of research students, involvement in University life and in the academic world, as well as the global standing of the relevant unit(s). The underlying assumption being that in a research university teaching and research are interconnected and mutually enriching.

Preparing the material for the review committee provides the unit(s) under review with an opportunity for self-assessment and serves as an important stage in the review process. The committee of world leaders in the monitored discipline convenes in Jerusalem for approximately a week, during which the committee meets with University leadership, staff, faculty and students. The committee's report is submitted to the Rector and the President, and is then discussed by the University's Committee for Academic Policy, which decides on steps to be taken both in the long and in the short term. The recommendations are posted on the Hebrew University website [[http://www.huji.ac.il/huji/eng/unit\\_bakara\\_e.htm](http://www.huji.ac.il/huji/eng/unit_bakara_e.htm)] and executed by the University management and the relevant Faculties.

Over the past years the following departments and Schools have been reviewed in the above manner: the School of Library Science (2004); the Institute for Earth Sciences (2005); the Department of Geography and the Institute of Urban and

Regional Studies (2006); the School of Occupational Therapy (2007); the Departments of International Relations and Political Science and the interface between them and the School of Public Policy and Governance (2007); School of Veterinary Medicine (2007); the Department of Physics (2007); the Department of Psychology (2008); the Department of Communication (2008) and the Department of Sociology and Anthropology (now under review).

Larger units were also reviewed, including: the Faculty of Humanities (2006); the Neuroscience activities which cover all brain researchers at various Faculties of the Hebrew University (2007); Plant Sciences at both the Faculty of Agriculture and the Faculty of Science are currently being reviewed.

In addition to the external reviews of academic units, all new teaching programs are now scheduled for review three years after their establishment. Interdisciplinary programs are usually reviewed by external committees. These include: Program in Philosophy, Economics and Political Science (2004); MA Program in Contemporary Middle East Studies (2005); MA Program in Conflict Management and Resolution (2005); Program in Computational Biology (2005).

Some programs were reviewed by internal committees. These include: Environmental studies (2006); the Talpiot Program at the Faculty of Science (2006); Cognition (2008).

A decision was made by the Standing Committee of the University to review Research Centers in-depth at least every seven years, in addition to the annual academic review. This review is being done in cooperation with the Authority for Research and Development.

### **Academic Boycott of Israel**

Over the past years there have been repeated efforts by academics in various countries to establish an academic boycott of Israel. Israeli scholars, and especially those at the junior stages of their careers suffered the consequences. A great effort was invested in combating this dreadful phenomenon by the Office of the Rector together with other academic institutions in Israel. The Israel Embassy, friends from the Jewish and other communities and academia from all over the world have helped. While these efforts have been successful to a great extent, the problem has not disappeared. Only recently (March and May, 2008) the British University and College Union (UCU) called for a reconsideration of academic measures against Israel. It is of great concern that this move may regain strength. We therefore should remain alert and every effort must be made to stop it.

## **RECOGNITION OF EXCELLENCE AT THE HEBREW UNIVERSITY**

### **Worldwide Rankings**

Moving up outstandingly from place 93 in 2003, in 2007 the Hebrew University of Jerusalem was ranked 64<sup>th</sup> among the world's 500 top universities by Shanghai Jiao Tong University whose rankings have achieved respected international recognition. The Hebrew University is the only Israeli institution included in the top 100 since the inception of world universities' ranking.

In the category of the top universities in the Asia Pacific region, the Hebrew University was ranked fourth, just after Tokyo and Kyoto universities in Japan and the Australian National University.

In the ranking published by the London Times, the Hebrew University ranked in 128<sup>th</sup> place among the top 200 universities in the world. In the field of Humanities and Arts, it was at 39<sup>th</sup> place among the world's 100 leading institutions of higher education

According to the ISI Web of Knowledge ranking of universities from all over the world on what is called essential science indicators over an 11-year period, from January 1, 1995, to December 31, 2006, in specific academic disciplines, the Hebrew University ranked either first or second in Israel in 17 of 20 categories listed. The nine categories in which the Hebrew University placed first are: chemistry, neuroscience and behavior, plant and animal science, microbiology, pharmacology and toxicology, geosciences, general social sciences, environment/ecology, and agricultural sciences. Outstanding rankings by the Hebrew University on a world scale in particular academic fields were: mathematics, 35<sup>th</sup> place; agricultural sciences, 48<sup>th</sup> place; pharmacology and toxicology, 54<sup>th</sup> place; and chemistry, 61<sup>st</sup> place.

The Hebrew University of Jerusalem is the leading institution of higher learning in Israel in terms of citations of academic papers published by its faculty members [<http://www.timeshighereducation.co.uk/hybrid.asp?typeCode=144>]. Such citations are a key indicator of the value placed by the academic community on the work of colleagues.

The ISI Web of Knowledge ranked universities from all over the world over an 11-year period as mentioned above. During that period, the Hebrew University led all other Israeli universities in the number of citations of academic papers published by its staff, with a total of 242,888 such citations.

On a world basis, the Hebrew University placed 109<sup>th</sup> in citations among 3328 higher educational and research institutions listed by the ISI Web of Knowledge, more than any other Israeli academic institution.

In the area of citations of academic papers, the Hebrew University was ranked especially high by the London Times ranking, with a score of 91 (out of a possible 100 points), which placed it at a level commensurate with the leading universities in the U.S. – among them Harvard, Yale, Princeton, Columbia and Stanford Universities -- as well as equal to or exceeding venerable universities in Europe and the Far East.

In a review by the Milken Institute of papers on specific topics, it was found that Hebrew University scholars published 6 out of the 20 most important papers in stem cells research (the only ones listed from Israel); and placed in the 12<sup>th</sup> position in biotechnology (Harvard 11<sup>th</sup>).

## Recognition of Excellence

### Israel Prize to Prof. Zeev Sternhell



**Professor Zeev Sternhell**, the Leon Blum Professor of Political Science is this year's recipient of the Israel Prize in Political Sciences. The judges described Sternhell as *"one of the leading scholars in the field of political thought in Israel and the world. His research led to a significant change in the scientific community in the concept of ideological movements in general and radical movements in particular."* He is the author of works in several languages, including: *Neither Right nor Left: Fascist Ideology in France*, *The Birth of Fascist Ideology*; and *The Founding Myths of Israel: Nationalism, Socialism, and the Making of the Jewish State*.

## Wolf Prize



**Prof. Howard Cedar**



**Prof. Aharon Razin**

### **Professor Howard Cedar and**

**Professor Aharon Razin** have been awarded the 2008 Wolf Foundation Prize in Medicine for their fundamental contributions to our understanding of the role of DNA methylation in the control of gene expression. They join five previous awardees of the total of 17 awarded to Israeli scientists. Their pioneering studies have had widespread impact on our understanding of development, control of gene expression, epigenetics and on cancer research. Following the determination of the patterns of DNA methylation *in vivo* and their correlation with the suppression of gene expression, they linked those findings to the recruitment of histone modifications associated with gene inactivation. Further they showed how DNA methylation patterns are laid down, erased, and reestablished in sperm, oocytes, and early embryonic development. These results are of the greatest significance for understanding the epigenetic transmission of expression patterns, particularly for imprinted genes, and are

critical to the study of imprinting malfunctions in humans, which give rise to many congenital defects. The changes in methylation patterns are also critical events for the control of embryonic development, as well as in any extensive development of methods for exploiting the embryonic stem cells.

## Rothschild Prize



**Prof. Moshe Bar-Asher** is the recipient of the Rothschild Prize in Jewish Studies for 2008 for his innovative and outstanding contribution to the study of Hebrew and Jewish languages. His work has been exceptional in the fields of Rabbinic Hebrew, Palestinian Syrian, and the study of Jewish languages in which he has laid new foundations through the preparation of editions of important texts and through his examination of Judeo-Arabic Biblical translations.



**Prof. Etan Kohlberg** is the recipient of the Rothschild Prize in the Humanities for 2008 for his profound scholarship and brilliant originality in his study of medieval Islamic religious thought and literature. His unique contribution to the study of Islam has been recognized also in the Islamic world and a significant part of his work translated into Persian, Turkish and Arabic. He is the author of several books, including a work of major importance for the textual history of the Qur'an.



**Prof. Itamar Willner** is the recipient of the Rothschild Prize for 2008 in the Chemical Sciences. He is an international authority in the fields of nano-biotechnology and bioelectronics. His pioneering research demonstrated innovative paradigms for the electronic activation of biomolecules, the synthesis of new electronic and optoelectronic material and the 'bottom-up' assembly of nanostructures on biomolecules. In these studies he bridges chemistry, biology and material science into an interdisciplinary research field at the forefront of modern science.

### EMET Prize



**Professor Aharon Barak** is this year's recipient of the EMET Prize for his unique contribution to the study of law and its development, for strengthening the rule of law and basic human rights in Israel, and for his outstanding contribution to enhancing the status of the legal system and the Supreme Court in Israel and throughout the world.



**Professor Avishai Margalit**, the University's Shulman Professor of Philosophy, is the recipient of the EMET Prize for his original and influential contribution in the fields of political thought, ethics and the philosophy of religion, and for his works dealing with the complex moral and political issues of this day and age. All these have made him one of the most important philosophers in Israel and abroad.



**Professor Shmuel Agmon** is the recipient of the EMET Prize for paving new paths in the study of elliptic partial differential equations and their boundary value problems and for advancing the knowledge in this field, as well for his essential contribution to the development of the spectral and scattering theories of Schroedinger operators.

### **The Mifal Hapayis Landau Prize**

The Landau Prize is granted to Israeli researchers who have reached achievements in their fields and have contributed to the advancement of science and research:



**Professor Hanah Margalit** is the recipient of the Landau Prize for her profound achievements in creating computer algorithms which describe various biological experiments, and on the use of such tools for high throughput analyses of transcriptional and post-transcriptional regulation pathways, explaining the functions of specific nucleic acid sub-classes.



**Prof. Michal Biran** is the recipient of the Landau Prize for her amazing work using her rare historical and linguistic abilities while knowledgeable in a number of cultures and the ties between them, from the Chinese culture to the Middle East and Islamic cultures.



**Professor Amihai Mazar** is the recipient of the Landau Prize for his work on a unique area: raising bees and producing honey during the bronze age, on the basis of archaeological findings at Tel Rehov.



**Professor Haim Sompolinsky** is the recipient of the Landau Prize for his pioneering work in the initiation and expansion of computational neuroscience as an internationally acclaimed field of research, and on his relentless efforts for establishing this new frontier at the Hebrew University's Interdisciplinary Center for Neural Computation (ICNC). Prof Sompolinsky has just been elected a member of the *US Academy of Arts and Sciences*.

### **Outstanding Young Researchers chosen to receive EU Research Grants**

Six young Hebrew University of Jerusalem scientists (out of the 27 Israelis among the 300 recipients) have been awarded five-year research grants under the European Union's first competition for outstanding starting independent investigators. The amount awarded to the six Hebrew University winners totals 7,378,400 Euros. For further information see page 104.

The winners were chosen on the basis of having presented excellent, ground-breaking research ideas, plus having displayed proven potential to establish independent research careers and to become world leaders in their fields. They are:

**Dr. Sigal Ben-Yehuda** of the Faculty of Medicine -- investigation of the nature of dormant bacterial spores.

**Dr. Tsachik Gelander** of the Einstein Institute of Mathematics -- group theory and geometry.

**Dr. Adi Mizrahi** of the Silberman Institute of Life Sciences -- using optical imaging to probe long-term neurophysiological changes *in vivo*.

**Prof. Re'em Sari** of the Racah Institute of Physics -- planets in the solar system and beyond: how they form and how they evolve.

**Dr. Assaf Friedler** of the Institute of Chemistry -- new methodology for the design of drugs that act by modulating proteins: applications for cancer and AIDS.

**Prof. Yuval Shany** of the Faculty of Law - - Effective Courts: the promise and limits of international courts and tribunals – exploring the conditions for effective international adjudication.

## Wolf Foundation Scholarships to Outstanding Doctoral Students

In a ceremony held on February 5, 2008, the Wolf Foundation awarded scholarships to outstanding doctoral students at all of Israel's seven institutions of higher education, 32 scholarships in all, among these eight students at the Hebrew University: **Michael Assaf, Vered Ben-David, Roi Vilozny, Yiftah Tal-Gan, Mati Yehoshua, Tomer Suissa, Gideon Koster, and Noam Stern-Ginossar.**

## Rector's Prize

The Rector's Prize is the most prestigious mark of recognition of faculty and students' achievements at the Hebrew University. Each year, an extremely rigorous selection is made of the 3-5 faculty members with high teaching achievements and excellent academic performance, who are also involved in and contribute to University life. This year the Rector's Prize for Excellence in Research, Teaching and Active Participation in the Academic Life of the University was awarded to:



**Professor Yigal Erel** studies the impact of anthropogenic activities on natural processes. In particular, he explores the influence of humans on the fate of metals on the surface of the Earth: in soils, groundwater, river water, and the atmosphere. Prof. Erel has shown that the natural concentrations of lead in groundwater and in rivers should be 100 to 1000 below the levels currently common in most fresh water systems of the world; and

that in addition to this increase, human perturbation caused significant changes in the chemical speciation and behavior of trace metals in aquatic systems. Another aspect of major concern is the speciation and lability of toxic metals in soils. This information is essential for planning remediation efforts of polluted soils.

Recently, Prof. Erel traced atmospheric dust from natural and anthropogenic sources in the Middle East. In addition to the conventional transport of atmospheric pollution, he discovered that atmospheric trans-boundary migration of metals affects both remote sites and urban centers, where local metal emissions were lowered. He launched *the Hebrew University Multi-Disciplinary Center for Environmental Research* for fostering multi-disciplinary research on environmental problems in Israel and the Middle East. Prof. Erel has been elected to become the chairperson of the *Institute of Earth Sciences* at the *Faculty of Science*.



**Professor David Weiss**, of the Smith Institute of Plant Sciences and Genetics in Agriculture, studies the development of plants. His research resulted in information on hormonal regulation which controls a variety of genes related to growth of cells and creation of pigments in the flower. The focus now is on understanding the path of hormone signal transduction in the cells of the plant and in the flower in particular. Further research revealed much about the molecular processes behind the creation of fragrance in flowers. This research resulted in the identification of new biochemical pathways involved in the production of various fragrance compounds. The results of his research have been published in eighty articles, some in the leading journals in the field of plant sciences.

In addition Prof. Weiss engages in applied research on development of new ornamental plants and cut flowers, some of which are grown today commercially and marketed in Israel and around the world. Prof. Weiss is one of the outstanding teachers in the Faculty of Agricultural, Food, and Environmental Quality Sciences. He has supervised many graduate and doctoral students, and has served and continues to serve on many committees in the Faculty and the University. Prof Weiss set up and headed the program of specialization in biotechnology.



**Professor Leona Toker**, of the English Department, specializes in novel, documentary prose, and classical narratology; in the author of *Nabokov* and in articles on English, American, and Russian novelists as well as on the overlap between literature and historical testimony. She is the editor of *Commitment in Reflection: Essays in Literature and Moral Philosophy* and co-editor of *Rereading Texts/ Rethinking Critical Presuppositions: Essays in Honour of H. M. Daleski*. She is Editor of *Partial Answers: Journal of Literature and the History of Ideas*, a semiannual refereed academic periodical sponsored by the School of Literature of the Hebrew University. Working with a group of graduate students as editorial board, she founded this journal in 2003. It won the 2004 Best New Journal Award of the Council of Editors of Learned Journals. Since January 2007 it is published and distributed by the Johns Hopkins University Press in cooperation with the Hebrew University of Jerusalem. She has served on a variety of University committees, and in 2002-2007 on the Council for Higher Education. At present she is completing a book on the ethics of narrative form. She believes in the integral relationship and reciprocal enhancement of research and teaching.

### **“Outstanding Teacher” Prize**

This year the four recipients of the Michael Milken “Outstanding Teacher” Prizes for continued excellence in teaching, as determined by annual surveys of the student population were:

Prof. Moshe Hirsh, (Faculty of Law, [mamoshe@mscc.huji.ac.il](mailto:mamoshe@mscc.huji.ac.il))

URL: <http://mishpatim.mscc.huji.ac.il/newsite/segel/hirsh/hirsh.html>

Dr. Lilach Sagiv, School of Business Administration

<http://bschool.huji.ac.il/new/index.php>

Prof. Ofer Biham, (Department of Physics, Faculty of Science

[biham@phys.huji.ac.il](mailto:biham@phys.huji.ac.il))

Prof. Lazar Friedland, (Department of Physics, Faculty of Science

[lazar@vms.huji.ac.il](mailto:lazar@vms.huji.ac.il)) URL: <http://www.phys.huji.ac.il/~lazar>

### **Rector’s Prize to students**

Of the 69 students who received the Rector’s Prize this year, we selected the following for profiling:



**Michal Hasson** was born and raised in Jerusalem. In high school she majored in biology and Arabic. After graduating she volunteered with Hashomer Hazair youth movement for a year of community service. During her military service she worked in social and educational programs in the town of Sderot for three years. She began her studies at the Hebrew University of Jerusalem in the Department of Islamic and Middle Eastern Studies and in the Department of Indian, Iranian and Armenian Studies. She is currently a graduate student in Indian Studies where she focuses on the Indian-Muslim culture. Among her historical research she studies Hindi, Urdu and Persian. Her thesis deals with the interaction between Indian religions and Islamic culture and tradition. Alongside her studies, she works at a human rights organization in Jerusalem, takes a course in ceramics and swims a few times a week at the University’s Sports Center.



**Eyal Benami** was born in Rehovot. He completed his B.A. degree in Biology, cum laude, at the Technion in Biology, focusing on molecular biology and genetic engineering. He is now studying for a M.Sc. Degree in Biotechnology focusing on agricultural biotechnology and the usage of molecular microbiology methods to improve biological control systems. In recent years, he worked in several research projects. In the future he would like to combine business education along with

his scientific education in light of his interest in applicative science.



**Dana Berezowsky** was born in Jerusalem. After completing high school she studied in a pre-army service Military Academy and then did her military service as a soldier-teacher in special education. At the Hebrew University, she joined the “*Hevrutah*” program of studying “*Gemara*” with a partner, and also worked as a volunteer in the *Perach* program, tutoring youngsters in need

of assistance. Today she is a member of the young student community in the Katamon neighborhood which is involved in the social activities of the neighborhood. In her spare time she loves to hike in Israel. In the future she is hoping to live in an active community and take a part in its social structure and at the same time to advance in the professional field of occupational therapy which she is now studying.



Tal Golan was born in Kfar Saba, the eldest of three sons. Following high school he spent one year in voluntary civil service as a youth instructor. Afterwards he served three years on an Israeli navy missile boat, as an electronic warfare systems operator. Today he is a third year student in cognitive science and psychology - a

field he was attracted to by riddles pertaining to brain, mind and consciousness, a domain which continues to fascinate him, time after time. Specifically, he is interested in studying human perception with a computational approach. He is currently working as a research assistant in Prof. Shlomo Bentin's EEG lab. In the future, he hopes to go on to graduate studies in the field, and eventually join the research community.



**Israel Dreyfuss** was born in Jerusalem 27 years ago, and grew up in Beit El. He is the fourth of seven siblings to parents who are an economist and a teacher. On completion of his high school studies in Jerusalem, he served in an elite unit of the Paratroopers in the Israeli army, where he served in several positions including as a Deputy Company Commander. He began his studies at the University in Law and Economics and towards the end of the first year he was called up, along with many of his fellow students, to fight in the Second Lebanon War. Despite the difficulties he excelled both in the first and the second year of his studies. A year ago he married Einat, a fellow student in the University's Department of Economics. He intends to carry out the internship program in both fields, law and economics, and would like to continue to do graduate studies abroad. In the very little spare time he has, he likes to listen to music, read and go to the theater.



**Michal Hasson** was born and raised in Jerusalem. In high school she majored in biology and Arabic. After graduating she volunteered with *Hashomer Hazair* youth movement for a year of community service. During her military service she worked in social and educational programs in Sderot for three years. She began her studies at the Hebrew University of Jerusalem in the Department of Islamic and Middle Eastern Studies and in the Department of Indian, Iranian and Armenian Studies. She is currently a graduate student in Indian Studies where she focuses on the Indian-Muslim culture. Among her historical research she studies Hindi, Urdu and Persian. Her thesis deals with the interaction between Indian religions and Islamic culture and tradition. Alongside her studies, she works at a human rights organization in Jerusalem, takes a course in ceramics and swims a few times a week at the University's Sports Center.



**Gili Schul** was born in Israel and grew up in Jerusalem and in Mevasseret Zion. After serving in the army for two years, she began her studies at the University in mathematics. Today she is completing her second degree focusing mostly in the field of Algebra. She is hoping to continue her studies next year towards a doctorate degree. Aside from her studies, she enjoys sports activities including physical fitness and dancing Flamenco. Gili likes to travel, mostly in nature, and she has been in the Spanish Pyrenees and in the Swiss Alps. Gili lives today in Jerusalem near the University with her boyfriend and their dog.



**Roni Holler** was born and raised in Hod Hasharon, the second son of a lawyer and a nurse. During his undergraduate studies in Philosophy and Developmental Aspects in Education at Tel Aviv University, he was first introduced to the population of people with mental retardation, through work as a counselor and later as a volunteer coordinator at the nonprofit Amichai organization. After graduating summa cum laude, he enrolled in the Dr Joseph Schwartz M.A program in Management of Non-Profit and Community Organizations at the Baerwald School of Social Work and Social Welfare. After a challenging and intriguing first year, he transferred to the direct track for a doctorate degree. The topic of his dissertation is: “Policy Making Regarding Unemployment of People with Disabilities”, under the supervision of Prof. John Gal.



**Liel Sapir** was born and raised in Jerusalem. After finishing his army service, he started his studies at the University. Today, he is a second year B.Sc. student in the chemistry and life sciences program, and has also joined the "Amirim" program this year. This past summer he joined Dr. Michal Goldberg's lab at the Alexander Silberman Institute of Life Sciences. The lab focuses on the DNA damage response in mammalian cells and on interactions between key proteins involved in that response. The work as a research assistant, allowed him to experience the work conducted in a real biology research lab for the first time and to be exposed to an exciting field of research. He was always very interested in both chemistry and biology, and the experience he gained at the Hebrew University has made him even more interested in both fields. He enjoys the different courses, and looks forward to the coming years, hoping to continue to a M.Sc. at the University.



**Adi Yaniv** was born in Kfar Saba in 1981 to parents who are an aircraft technician and an educational consultant. Her younger brother is currently serving in the Israel Defense Force. After graduating from high school, she volunteered for a year of community service with friends from the “*Hanoar Haoved*” youth movement. In the IDF she served as a basic training squad leader and a shooting instructor. After her military service she traveled to India. In 2003 she began her studies at the Hebrew University as a biology student and currently is a graduate student in the Faculty of Dental Medicine where her research focuses on oral biology – regeneration of salivary glands. Her hobbies include traveling, painting, reading and scuba diving.

## NEW FACULTY

In recent years we have introduced changes in the hiring policy of new faculty and raised considerably the quality requirements. Every year the **Report** profiles some young faculty, and we introduce below several of our new faculty:



**Dr. Eran Meshorer** began his studies in biology at the Hebrew University of Jerusalem, and concomitantly studied classical guitar at the Rubin Academy of Music. Later, he became an *ad-hoc* project manager at the Jerusalem Music Center, working closely with great performers such as the Emerson and Juilliard Quartets and Maestro Isaac Stern. He completed a Master's degree

in Microbial Ecology with Prof. Yehuda Cohen and joined Prof. Hermona Soreq's lab where he studied the long-lasting effects of stress in the mammalian brain. Focusing on the nature and regulation of alternative splicing in the brain, his main finding of a key gene involved in these responses awarded him the Teva-ISBMB prize for an outstanding Ph.D. dissertation. In his post-doctoral training with Tom Misteli at the NCI, NIH, Eran used advanced laser-based microscopy to study the dynamics of nuclear activities in embryonic stem cell (ES) differentiation. Dr. Meshorer joined the Department of Genetics in the Faculty of Science last summer, where he studies nuclear processes in living ES cells under different conditions. Using state-of-the-art microscopic equipment, Eran is capable of viewing chromatin dynamics during ES cell differentiation, and his results are bound to yield important results at both the basic and the translational research levels.



**Professor Jonathan Huppert** immigrated to Israel from the United States and joined the Department of Psychology in the Faculty of Social Sciences in August 2007. Previously he completed his post-doctoral training at New York Presbyterian Hospital/Weill College of Medicine at Cornell University, and joined the faculty at the Center for the Treatment and Study of Anxiety in the University of Pennsylvania School of Medicine.

Professor Huppert's work is aimed at developing the optimal psychosocial treatments for anxiety and related disorders (social anxiety disorder, panic disorder, generalized anxiety disorder, obsessive-compulsive disorder, posttraumatic stress disorder and specific phobias). His research, teaching, and clinical work all suggest that issues in clinical psychology should be examined through the scientific method, and that integrating findings from disparate areas of psychology to come up with novel hypotheses will help advance knowledge, with the hope that the results can assist many individuals in obtaining relief from the suffering and impairment that they experience due to pathological anxiety.



**Dr. Sigal Ben-Yehuda** carried out her graduate studies at Tel-Aviv University, at the Department of Molecular Microbiology and Biotechnology. Her research focused on understanding cell cycle progression in the budding yeast *Sacharomyces cerevisiae* as a model organism. She continued her scientific career as a postdoctoral trainee at

Harvard University where she studied aspects of cell division and development in bacteria. The results were published in top scientific journals (Science, Cell and Molecular Cell). Dr. Ben-Yehuda joined the Hebrew University Medical School in November 2003 as a senior investigator. Since then she described for the first time a remarkable protein that scans chromosomes for DNA damage; she won the EMBO Young Investigator Award in 2006 (given only to 20 young scientists from Europe each year), and has just received the prestigious five-year European Research Council Starting Grant (1.68 million Euro). Dr. Ben-Yehuda was recently awarded the Hebrew University President's Prize for Outstanding Young Researcher.



**Dr. Ruben Borg** is a lecturer in English and Italian at the Hebrew University of Jerusalem. He began his undergraduate studies at the University of Malta where he completed his B.A. finishing top of the faculty list. He then went on to read for an M.A. in Anglo-Italian literature before undertaking doctoral research at the Hebrew University of Jerusalem under the guidance of

Prof. Moshe Ron. His dissertation (approved *summa cum laude*) challenged the widely held assumption that time in Joyce's later work can be organized around the idea of an originary and perpetual present. Between 2005 and 2006 Dr. Borg conducted post-doctoral research at the University of Pennsylvania, working on a new project titled *Fantasies of Self-Mourning: the Posthuman and the Problem of Genre*. Since 2003 he has served as associate editor of *Partial Answers*, an academic journal sponsored by the School of Literatures at the Hebrew University and published by Johns Hopkins University Press. In 2004, *Partial Answers* was awarded the prestigious title of "Best New Journal" by the Council of Editors of Learned Journals. Recently, Dr. Borg has been honored with an appointment to the Young Scholars' Forum at the Israel Academy. At present, his areas of teaching and research include Modernism, Dante, and Literary Theory. He has published numerous articles on twentieth-century literature and a book entitled *The Measureless Time of Joyce, Deleuze and Derrida*.

## **CANDIDATES, STUDENTS AND STUDENT SERVICES**

### **The Student Administration Division**

This year the Student Administration Department became a Division due to the variety of areas that it deals with. This Division, headed by Ms. Billy Shapira, handles all administrative tasks connected with students, from enrollment to graduation. The Division assumes responsibility for setting administrative criteria and the implementation of academic standards for admission; marketing the University to potential students, from the ignition of interest in learning at the Hebrew University to registration and admission. The Division handles the computerized registration of study programs and grades, evaluation of faculty teaching quality, setting criteria and distributing budgets for financial aid for students in need and scholarships for outstanding students, handling financial accounting (tuition fees, scholarships and loans).

A telephone service center functions 24 hours a day. In the daytime the service is operated by students and functions as a "one stop shop", on admissions, grades, tuition fees, scholarships, etc. From the afternoon hours the phone service is operated by a computerized answering machine.

The University, through the Division, also provides personal counseling regarding choice of field of study by personal meeting with a special adviser.

## **Admission**

In recent years the University has simplified and computerized the admission process. Reliable information on both admission and the chances of acceptance is provided in a simple interactive short visit to the University's web-site [<http://info.huji.ac.il/ShowPage.asp?cat=400>]. The response is immediate. Additionally, on-line enrollment has been offered since 2002 and in 2007 71% of the candidates have already enrolled using internet entry, from all four corners of the world.

In each of the past six years, the thresholds of admission criteria were raised in nearly all departments, almost always accompanied by an increase in demand and the number of students enrolling. This continual increase in the threshold of admission results in better students, improved discourse in the classrooms, a lower percentage of drop outs or dragging, and it is expected to have a higher percentage of graduates interested in continuing their academic studies and research.

A year ago the process of admission to the Schools of Medicine and Dental Medicine was revised in an effort to choose the better candidates both in cognitive indices and in personality components, with the hope to admit students who will later become even better doctors both professionally and in terms of human relations, interpersonal communications skills, more compassionate and more understanding. Learning abilities and knowledge are essential conditions but not sufficient as certain personal and interpersonal characteristics are also required in the medical profession. Hence, the 400 candidates for medical studies with the highest academic scores undergo an elaborate interviewing process geared to select the top 100 by examining components such as ethical attitude, honesty, empathy, responsibility, commitment, interpersonal communication, initiative and leadership, sensitivity, maturity, ability to withstand pressure, and self-awareness.

The dental profession requires personality characteristics similar to the medical profession but in addition manual skills are very important. In a pilot computerized test originally developed for the Israeli Air-Force, candidates are evaluated and their results compared to their achievements in their first year of studies.

## **Teachers and Course Evaluation and Registration for Courses**

Enrolling and approving the course programs has been upgraded significantly and is now done via the internet, before the beginning of the academic year. The system automatically checks eligibility and compatibility, and also includes a lottery for placement in courses with high demand according to the student's order

of priorities. Thereafter, the program provides an approval by e-mail. The students may, however, receive assistance in preparing their course program if they wish.

Following a thorough study by a professional committee in 2007, students' evaluation of teachers and courses was changed from paper questionnaires to an electronic survey conducted by the Student Administration Division. Consequently, rapid and reliable responses are provided to all parties concerned. This serves students with information so that they can select courses and teachers in an educated and timely manner. Teachers receive an immediate feedback on their classes, and administration can respond in a timely manner to help faculty with teaching difficulties. The Standing Committee of the University's Senate decided to publicize the results of the entire evaluation surveys, providing full disclosure for the benefit of the students.

Following the results of the evaluation of teachers and courses, the University offers workshops for faculty to improve their teaching, including guidance in the efficient use of multi-media in teaching and preparation of exams.

### **Reducing “drop out” phenomenon**

Supported by the Gilbert Foundation, Prof. Gad Yair studies the reasons that students drop-out. Some 2,000 students and former students are completing questionnaires and are being interviewed in an attempt to assist the University in identifying the main reasons for this phenomenon and then targeting the problem areas. In addition to the support system (e.g., special tutoring, support groups, adopting brothers, counseling, and more) for students with special needs, including minorities and new immigrants, the University will use the information obtained to invest efforts to correct the situation and help students cross the hurdles of the first year encounter with academic life and education.

### **Student Prizes, Aid, and Services**

We continue with our policy that every student in need who meets the academic requirements for admission is eligible for financial aid in order to study at the Hebrew University. In addition the University offers a variety of scholarships, fellowships and awards to its most successful students, at the level of undergraduates, masters and Ph.D., as well as to post doctoral trainees.

An information web-page detailing all sources of monetary support was made available to students at the Hebrew University. The site provides on-line information on the sources, application dates, eligibility and contact addresses as well as application forms, direct links to specific web pages and more. [[http://www.huji.ac.il/huji/adm\\_milgot.htm](http://www.huji.ac.il/huji/adm_milgot.htm)]

## **Special Scholarships for Outstanding Students**

### ***Outstanding Undergraduate Students***

A special fund was established at the Rector's Office to provide scholarships for outstanding undergraduate freshmen in the fields of business administration, health sciences, agriculture, education and a number of fields in the Humanities. Candidates selected by the Rector will receive a \$7,000 per year scholarship to cover tuition and provide support for living expenses. Recipients with excellent achievements will continue to receive the special scholarship again in the following year. The Fund will increase the number of scholarships gradually reaching 200 annually in 2010/2011 and on.

### ***Albert Einstein Scholarships***

The University awards its Albert Einstein Scholarships annually to outstanding students as follows: to 60 undergraduate second and third year outstanding students (\$6,000); to 60 outstanding Masters degree candidates (\$16,000) and to 60 outstanding Ph.D. candidates (\$22,000). These Scholarships cover tuition, living expenses, and provide a small research grant for the Masters and Ph.D. candidates.

## **Student Numbers**

The number of freshmen this year (2008) is lower than last year by 350, mostly as a result of cancellations due to the lengthy strike by the senior faculty staff at the beginning of the year. The University offered first year Bachelor's and Master's degree students the option of postponing their studies to the coming year without a repeat of the admission process, and 160 students accepted. The three consecutive disturbed academic years [Second Lebanon War; Students' and faculty strike, in 2005, 2006 and 2007, respectively] resulted in dragging and also in a drop in the number of master's students, as students did not complete their undergraduate studies in time and thus could not enroll in the graduate programs. A long run effect is expected with regard to research students (Ph.D. students) with an adverse impact on the University research output, especially in the experimental departments.

## **Following the Strike**

Following the prolonged strike by the senior academic staff, the University extended the school year to compensate for the time lost and complete the academic requirements. The academic year will now end only on August 4<sup>th</sup> and then exams will run virtually until the end of September. The University Administration tried to

ease the burden on the students by making certain concessions which include: The opportunity to delete one elective course from this year, increased library/computer center hours, additional dates for writing exams, extended period for cancellation of courses, and deferment of pre-requisite demands. In addition, the University will provide additional scholarships to assist students who were dependent on summer work to provide them with the resources to continue with their studies. The University will enable the students to remain in the dormitories through the summer without having to pay rent for this additional period.

### **The Berel and Agnes Ginges – Australia Computer Centres**

The five Berel and Agnes Ginges – Australia Computer Centres established in recent years on all four campuses of the University, provide the students with state-of-the-art computer facilities and support. These Centres offer the students vital services and are used to capacity for many hours each day. On the Mount Scopus campus alone there are 427 computer stations located in the two Ginges Computer Centres and 222 in eight classrooms. Additional periphery equipment available to the students includes printers, scanners and DVD and CD recorders as well as information screens.



Students at work in one of the Ginges – Australia Computer Centres

## The Library Authority

Following several years of severe budgetary limitations, the continuing rise in the cost of publications, and the excessive branching of libraries which resulted in a vast inefficiency, a decision was made in 2003 to establish the Library Authority to increase efficiency in budget management and allocation, centralize and coordinate the acquisition of books and journals, intensify training and professionalism, deal with personnel management, unification and upgrade of the catalogue for all the University's libraries and improve services to users.

Since then, the Library Authority stabilized and standardized budgetary procedures and coordinated relations with all faculties regarding their library services. The number of libraries was reduced significantly (from almost 30 to 8); abolished unnecessary duplications and improved services by setting standing professional committees to deal with cataloguing, acquisitions, circulation and reference.

In the last two years the Library Authority embarked on a new project of adapting the physical environment of the libraries to the "new age" of on-line services and interactive learning, by transforming part of the library halls into modern *Computerized Information Commons*. The project is facilitated by generous donations from the Ginges family and the Orion Foundation. The first library to have been renovated was the Law Library. It was followed last year by the Medical Library, and this year by the Central Library on Mount Scopus.



Students at work in the Law Library



Students at work in the Prusiner Medical Information Center

The Library Authority and National Library have instituted a cooperative mechanism to avoid duplication and enable the best possible use of resources for acquisitions. The catalogues of the different libraries were unified and the 'Aleph 500', a state-of-the-art library management program was introduced, and a link server has made available enabling easy access to all electronic journals, thus providing easy access to the full text of any desired article in one of more than 20,000 electronic journals.



Another project which the Library Authority initiated in collaboration with the Authority for Research Students is the establishment of a digital dissertation depository. All the Ph.D. dissertations will be handed in on CD (in addition to the printed copies) and will be put on-line and be available on the Hebrew University e-network.

## **NEWS FROM THE UNIVERSITY AND FACULTIES**

### **Faculty of Humanities, Prof. Israel Bartal, Dean**

The Faculty of Humanities was listed in the 39<sup>th</sup> place in the arts and humanities in a ranking of the world's 100 top universities by The London Times Higher Education in 2007 compared to the 43<sup>rd</sup> place in 2006. However, despite its excellence and lesser than the situation of the Humanities in other Israeli universities, there was a small decrease in the number of students to the Hebrew University's Faculty of Humanities for the 2007/2008 year – 865 compared to 938 in 2006/2007 (including the School of Education).

As reported last year, the International Committee headed by Prof. Gager submitted its recommendations on the future of the Humanities at the Hebrew University and. the Report was adopted both by the Faculty and the Academic Policy Committee of the University, and the Faculty has started to implement the recommendations.

The first major change made during the current academic year is the introduction of two new requirements for all freshmen in the Faculty: One is a “general skills” course which provides students with the basic proficiency in scientific reading and writing with 627 students participating in 56 sections. The other is a requirement for one to three “gateway” courses which expose the students to a variety of disciplines outside the specific disciplinary track elected by the student. The teaching and curricula of the "gateway" courses are the responsibility of the chairpersons of the five Schools at the Faculty: the already established School of History, and The School of Literature, and the Schools in the process of being established: The School of Modes of Thought, the School of Arts and the School of Language Science – a major structural change adopted following the Gager Committee recommendations.

Further, the Faculty has implemented several changes in its academic structure. Some departments are being merged and their total number is being reduced from 33 to 22. Institutes have become research bodies exclusively. The five new Schools (mentioned above) are responsible for the teaching of disciplinary and methodological courses related to their fields, while departments (supervised directly by the Dean through a Vice-Dean for Academic Affairs) are responsible for specialized teaching.

The faculty has appointed a Vice-Dean in charge of all research activities with the aim of promoting research activities and extramural funding, and a special committee nominated by the Dean considers further administrative structural changes. Its recommendations are expected in the near future.

Since October 2007, the Faculty of Humanities has started a new “Honors Studies” program for its most distinguished Ph.D. Candidates. With the support of the University, scholarships (\$10,000 *per annum*) were awarded to the top 40 graduate students at the Faculty. These students are obliged to undertake extra loads and participate in two special workshops, focusing in 2008 on "Travel Narratives" and "Bodies of Knowledge and the Embodied Work of Art". Another elective workshop is offered in order to improve their proficiency in scientific writing in English. Students that meet the requirements and demonstrate substantial progress in their research will be awarded scholarships for another three years.

In the current academic year the Faculty of Humanities introduced a new program on "Judaism as Culture" which aims to present the variety of ideological, social and cultural trends that emerged in Jewish societies all over the world in modern times in response to the growing secularization of political and social environments. The students will be exposed to the heterogeneity of modern Jewish culture, while examining its roots.

With the opening of the new Center for German Studies, an interdisciplinary master’s degree program is being offered in German, integrating studies from the Faculties of Social Sciences, Law and Humanities, with an emphasis on Modern (after 1945) German Studies.

### School of Education



**Prof. Phillip Wexler** was elected the new Head of the School of Education, replacing Prof. Yaakov Kareev. Prof. Wexler specializes in Sociology of Education and the relationship between Spirituality, Education and Sociology. He has done extensive research on identity and social interaction among adolescents of different social backgrounds in schools.

Prof. Phillip Wexler reported on a new program at the School of Education for the study of learning disabilities geared to teach the students about the major aspects of the field. The program offers theoretical courses in three major areas: language, both spoken and written; numerical cognition and attention. In addition a comprehensive array of courses provide its students with the tools for conducting clinical work and/or research in the field, especially on the disabilities' cognitive and neurological bases, characteristics, methods of diagnosis, and appropriate interventions.

### **Faculty of Social Sciences, Prof. Boas Shamir, Dean**

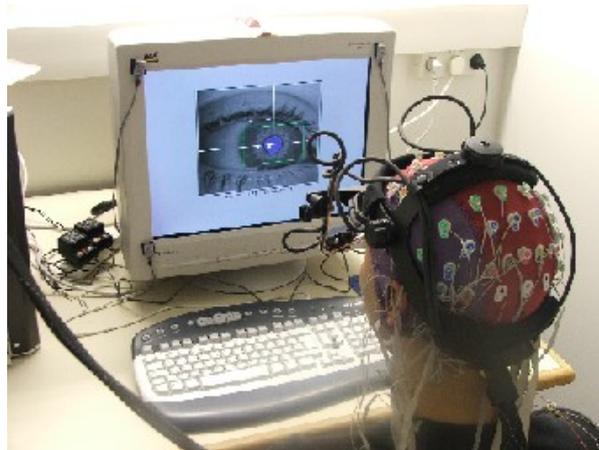
In 2007, the Faculty of Social Sciences was ranked 40<sup>th</sup> among the faculties of social sciences in the world's 500 top universities by Shanghai Jiao Tong University [<http://ed.sjtu.edu.cn/ARWU-FIELD.htm>].

The Faculty of Social Sciences, in cooperation with the Faculty of Humanities, has opened a research center and a new Master's degree specialization in Modern German Studies.

The Florsheimer Studies Program attached to the Institute of Urban and Regional Studies has opened. Its objectives are to promote research and contribute to policy making in three areas: local governance, the relationships between Arab and Jews in local communities, and the integration of *Haredim* (Ultra-Orthodox) in Israeli Society. The Program organizes conferences and symposia, supports research, and publishes research and policy papers in the above-mentioned areas.

The inaugural lecture in a new series of annual lectures on Population Studies and Growth funded by the Doran Family Foundation in Britain was given in March 2008, by Professor William Easterly of NYU.

The Department of Psychology has opened three new laboratories, among them a laboratory for the study of social anxiety disorders (see page 27). In the Department of Geography, members of the Synoptic Lab analyze satellite data to measure atmospheric pollution, and a new remote sensing laboratory is being established.



Professor Zeev Sternhell of the Department of Political Science was awarded the Israel Prize (see page 15).

**School of Social Work and Social Welfare, Prof. Gail Auslander, Dean**

The Paul Baerwald School of Social Work and Social Welfare offers five programs of study: the Bachelor's degree in Social Work (conditional for practicing social work in Israel), three Master's degree programs and a doctoral program. Social work education remains in high demand in Israel, particularly at Hebrew University. This has allowed us to maintain high standards of admission in all of our programs, and to consider the possibility of expanding some of our programs, particularly at the graduate level. This year we began several new programs: A joint MA/MSW degree in Social Work and Criminology together with the Faculty of Law; an Administration specialization in the MA in Early Childhood Studies (Schwartz Program); an MA in Community Leadership and Philanthropy through the Rothberg School for Overseas Students.

The School has also begun a three-year academic-community collaboration in the Pisgat Ze'ev neighborhood of Jerusalem, in collaboration with JDC-Israel and the Apte Family Fund.

There are five research groups operating within the School, including the Social Policy Research Group, the Research Group on Mental Health and Well-Being of Children and Adolescents, the Social Work in Health Research Group (in collaboration with Hadassah), the Center for the Study of Philanthropy (in collaboration with JDC-Israel) and the Israel Gerontological Data Center.

The Social Policy Group has initiated the Annual Jerusalem Conference on Social Security, in collaboration with the National Insurance Institute. Other conferences held or planned this year include a conference on "children leaving care" (those children who have been in foster or institutional care until the age of 18), a meeting on social policy in the Mediterranean region, and an international conference on Research Ethics. We are also initiating a monthly seminar on Best Practice in Social Work in cooperation with the major social services agencies in Jerusalem.

**Jerusalem School of Business Administration, Prof. Tsvi Piran, Dean**

This year the school has recruited two members to strengthen its Information Technology unit, Prof. Ronen Feldman (Former CEO of ClearForest) and Dr. Michal Feldman. The energetic and reorganized Information Technology group has already several Ph.D. students and post-docs.

The School established The Fishman and Calcalit Jerusalem Center for Finance and Real Estate. This center will focus on research and teaching in the inter-related fields of Finance and Real Estate - a particularly important topic due to the dominant role of Real Estate in the world financial markets in general and in the particular role that Israeli companies are active today in the international real estate markets.



The School invests time and efforts in its Placement Center funded by a donation from Harvey Krueger. The Center provides students with guidance on the job application process. The Center holds an Employment Fair where many of the leading firms in Israel participate and hire students graduating.

### **Faculty of Law, Prof. Yoav Dotan, Dean**

Following the retirement of Chief Justice Aharon Barak of the Supreme Court of Israel, the Faculty of Law decided to launch The *Aharon Barak Center for Legal and Multidisciplinary Research*. This Center will provide research grants and fellowships for Ph.D. and post-doc students and other academic activities in various fields of law.

In 2007 the Faculty of Law successfully launched two new interdisciplinary LL.M. Programs, with the School of Business Administration and the Institute of Criminology. These programs enable law students to complete an M.B.A degree in finance or a Master's degree in criminology within a year after the completion of their law degree.

During the last two years, the faculty also established a number of research forums which are aimed to encourage work in legal research and intensify inter-disciplinary research efforts. Currently, there are seven research forums

active in the Faculty of Law: The International Law Forum, The Forum for Law and Economics, The Forum for Law and Philosophy, Jerusalem Group for Research in Criminal Law, Public Law Forum and Labor and Social Security Law Forum. In addition there are two research workshops active in the Faculty in the field of intellectual property law and in the field of law and history. Next year the faculty will launch an additional workshop in civil law.

### **Faculty of Science, Prof. Hermona Soreq, Dean**

Prof. Soreq reports that the Faculty of Science is recruiting a number of excellent new young faculty, and five of its faculty have received this year's European Union research grants (see page 19).

The **Institute of Chemistry**, headed by Prof. David Avnir, is recruiting Drs. Raed Abu-Reziq and Roie Yerushalmi. Following his studies at the Hebrew University, Dr Abu-Raziq specialized in Ottawa University in Organic Chemistry and in particular in "clean" synthesis run under micro-wave irradiation. Dr. Yerushalmi focuses on recent advances in nano-science, and develops novel tools for testing the properties of nano-materials adhered to a solid surface. This year, Dr. Assaf Friedler is a recipient of the European Union research grant.

At the **Racah Institute of Physics**, headed by Prof. Shimshon Elizur, a recipient of the prestigious European Union grant is Prof. Re'em Sari who returned last year from Cal Tech and joined the Institute as a Professor of Astrophysics.

At the **Silberman Institute of Life Sciences**, headed by Prof. Ioav Cabantchik, Dr. Adi Mizrahi - an expert in renewal of neuronal structures in the mammalian brain - is the recipient of the prestigious European Union research grant. Three new faculty members will join the Institute of Life Sciences: Dr. Sagiv Shifman from Oxford, a new age geneticist with a flair for large genome projects and an interest in the genomic origin of nervous system diseases; Dr. Liran Carmel from the NIH in Bethesda, a bio-informatics specialist with interests in the evolutionary processes which developed over millions of years to enable the production of more than one protein from one gene; and Dr. Sebastian Kadener from Argentina, a new immigrant to Israel who specialized at Brandeis University in gene expression events which affect the behavior patterns in the fruit fly and will thus bridge between molecular biology and neuroscience.

At the **Einstein Institute of Mathematics**, headed by Prof. Ehud De-Shalit, Dr. Tzachi Gelander is a recipient of the prestigious European Union research grant. An exciting development is that Prof. Eilon Lindenstrauss returns to the Hebrew University of Jerusalem from Princeton where he currently is a full Professor. Another new recruit from the Mathematics Department at Princeton is 26 year old Dr. Jake Solomon who will join the Institute in the coming academic year. Together with three other new recruits, this group of talented young men will change the age distribution in the Institute and will contribute much to its quality and fame.

At the **Institute of Earth Sciences**, headed by Prof. Yigal Erel, Associate Prof. Einat Aharonov will soon join the faculty. Prof. Aharonov specializes in theoretical geophysics.

This year the **School of Computer Science and Engineering**, headed by Prof. Michael Ben-Or, will recruit two young faculty members in Computer Science: Dr. Guy Kindler from Microsoft and Dr. Amir Globerson from MIT. There are a growing number of students in the School which recently opened a new graduate program in Bio-Engineering. Prof. Boris Rubinsky who heads the Research Center for Bio-Medical Engineering in the Service of Humanity and Society was widely acclaimed recently in the press for development of a process to transmit medical images via cellular phones with the potential of providing sophisticated radiological diagnoses and treatment to the majority of the world's population lacking access to such technology, as well as those in rural areas of developed countries who live considerable distances from modern medical centers.

The Faculty of Science is in the process of developing a whole range of new study programs as follows:

An **M.Sc. in Computer Science** for excellent Computer Engineering (CE) graduates, who are interested in continuing their education towards a higher degree.

An **M.Sc. in Hydrology**: Hydrology has undergone considerable progress as a scientific field which requires solid knowledge of physics, mathematics, chemistry and computer science. This program at the Institute of Earth Sciences is based on a spectrum of courses presently offered at Hebrew University and new specialized courses in Hydrology. The planned merging between the two public institutions: The Geological Institute and the Geophysical Institute, and the joint program between the Geological Institute

and Hebrew University will allow for advanced teaching by highly qualified, experienced and knowledgeable experts in the field for the education of a new generation of researchers in Hydrology.



**An M.Sc. degree in Physics with specialization in Nano-Science and Nano-Technology:** The program reflects the interdisciplinary nature of nano-science and therefore includes courses in both chemistry and nano-biology. Among the new courses the one on “Physical Techniques for Characterizing Nano-scale Substances” will include work with instrumentation available in the characterization unit of the Krueger Family Center for Nano-Science at the Hebrew University.

A **B.Sc.Des** program in “**Design, Modeling and Computer Science**” in cooperation with The Bezalel Academy for Art and Design is a bachelor’s program for an interdisciplinary degree requiring expertise both in computer science and in one of the various fields of design. By merging the two disciplines, the program aims at redefining the field of design and enriching the research of the relevant domains in computer science. The program aspires to endow the skills of algorithmic modeling, computational analysis and technological application on one hand, and a deep perspective in the world of design, on the other. The students will acquire tools to generate new channels of design and eventually evolve as the next generation of researchers and inventors of novel technologies and interfaces.

**A B.Sc. degree in Biological Physics:** A bi-disciplinary program in Physics and Biology, aims to provide wide training and a strong basis for research and development connected with the two disciplines and their combinations. It provides deep physical understanding, wide mathematical background, know-how of chemical processes and understanding of the biological world. Graduates will be able to continue their studies toward advanced degrees in either life sciences or physics. The program provides an excellent background for advanced degrees in interdisciplinary areas such as neurobiological computation and biomedical engineering, as well as an excellent basis for employment in biotechnology industries.

**An M.Sc. degree in Applied Physics - A Study & Research Program** for students interested in integration of scientific research with initiative and ability to manage research and development. This program is open to students who completed four years of undergraduate studies in Computer Science with an expertise in optic/ microelectronics.

**An M.Sc. degree program in Bioengineering:** Bioengineering is an interdisciplinary field of study that combines life sciences, physics, mathematics, chemistry, computer science and engineering to advance fundamental knowledge and applications in the fields of biology and medicine. It deals with the development of new devices, techniques, analytical methods, experimental methods and system analysis for the study of biology and in medical applications. The program aims to develop the ability of students to apply engineering and fundamental science knowledge and techniques to biological and medical problems.



**Basic Studies:** Presently, courses in Mathematics, Physics, and Chemistry are offered by the relevant departments as separate units. It is deemed important to allow students capable and interested in taking higher-level courses than the ones offered in their respective department to do so. Consideration is now being given to creating a series of courses in Basic Studies from basic to the highest level and make them available across the Faculty. Bachelor's degree students will thus be allowed to include in their curriculum one or more of such elective courses in fields of science different from their majors.

**Faculty of Medicine, Prof. Ehud Razin, Dean**

During the 2007/08 academic year, the Faculty of Medicine introduced a new program in **Medical Humanities**, thus providing its students with an interdisciplinary academic domain combining topics from the Social Sciences and the Humanities. The program focuses on the humanistic aspect of the medical profession, including relationships between physicians and their patients. This subject has long been based on a body of ethical principles developed primarily for the well-being of patients, but rapid progress in science and technology have threatened the interrelations between patient and healer. Through the program, we hope to train more empathetic physicians, who will bring the best science and technology available to care for their patients, but always in a caring, respectful, and sensitive manner.

An institutional committee was established for the evaluation of medical school studies. In addition to the new program on medical humanities, the Committee recommended the admission of excellent graduates of life sciences to the second year of medical school; the addition of courses on statistics and research methods; the incorporation of problem-based learning (PBL) courses in the pre-clinical studies, already in the second year of studies; and more pre-clinical courses to be taught in small groups.



The recently established Institute for Medical Research is establishing two new research departments, i.e., the Department of Microbiology and Computational Biology with 13 research groups, dealing with various aspects of biology and physiology of infectious diseases, prion diseases, novel anti bacterial drugs and computational modeling of biological processes in health and disease. The other is the Department of Developmental Biology, with 14 research groups, that will focus on genetic, molecular and biochemical processes regulating the development of biological systems, tissues, organs and organisms. Emphasis will be given to the understanding of developmental defects underlying the emergence of cancer, autoimmune disorders, cardiovascular maladies and birth defects.

At the **School of Occupational Therapy, headed by Prof. Shula Parush**, two new courses have been added to the curriculum. One focuses on models and the promotion of function and social participation by removing barriers that limit occupational performance; the second addresses functional assessment measures of aspects of individual daily life performance. In addition, two undergraduate courses on mental health and on physical disabilities were modified to address the issue of community-based occupational therapy intervention and rehabilitation. In the graduate program, a research seminar was introduced which expands on advanced research issues relevant to the students. Modifications were also made to the Advanced Seminar in Occupational Therapy and Measurement in Occupational Therapy courses to incorporate up-to-date concepts in health care.



The academic review of the School for Occupational Therapy recommended, *inter alia*, the development of an integrated structure that would facilitate collaboration among the schools and departments within the Faculty of Medicine and across the University. Students from the School will study some of the courses with students of the Faculty of Medicine. In addition, an interdisciplinary research center for rehabilitation of people with special needs will be established.

**The Henrietta Szold Hadassah Hebrew University School of Nursing**, headed by Dr. Miri Rom, this year celebrates 90 years of creativity, leadership and excellence in nursing education, practice and research. The admission criteria to the school are the highest in the country and they have risen continuously and sharply over the last ten years. The School is the largest in the country, granting about 180 BSN degrees annually with its graduates ranking at the top of national nursing board exams achievements. New in the curriculum is a unique expanded unit of study in the area of emergency nursing and an emphasis on evidence based practice. Seven years ago a generic clinical MA nursing program was launched (the first in its kind in the country). Faculty areas of research include ethics, end of life decision making, symptom management, sexuality, cultural diversity, stress incontinence, patient decision making, pain, nursing history and nursing education. Faculty also developed areas of clinical expertise such as intimacy clinician, family therapist, cultural competence expert, health promotion consultant, evidence based and research development consultant. This year, the school established a nursing research center to further the efficacy and efficiency of the above academic pursuits.

**The Hebrew University – Hadassah Braun School of Public Health**, headed by Prof. Shmuel Shapira, strives to improve the physical, mental and social welfare of the population of Israel and elsewhere with a commitment to excellence in academic research; develop and train professional leadership; influence the welfare of the individual, his/her family and the community, based on equity and fairness; and create cooperation with academic and research institutions in Israel, the Middle East and worldwide

**The School of Pharmacy**, headed by Prof. Israel Ringel, initiated major changes in its educational programs and research management during the past year. A steering committee from the School of Pharmacy and the Faculty of Medicine, endorsed by the Dean of the Faculty of Medicine and the Rector, examined and discussed new directions in research management and educational programs. The committee invited experts from all sectors of the pharmaceutical fields including pharmacy practice (clinical, community and regulation authorities), drug research and development and the pharmaceutical industry. The committee explored avenues for improving and optimizing the research capacity and professional pharmaceutical training.

The above resulted in a renovated and improved program that includes new courses in emerging fields of knowledge. The committee also suggested replacing the current three curriculum disciplines (Pharmaceutics, Medicinal

Chemistry and Pharmacology) with two entities; one responsible for all basic sciences (named: Drug Sciences), thereby promoting multi-disciplinary teaching programs, and the second focuses on Clinical Pharmacy.



Chemistry and Pharmacology) with two entities; one responsible for all basic sciences (named: Drug Sciences), thereby promoting multi-disciplinary teaching programs, and the second focuses on Clinical Pharmacy. The need to develop future leadership in pharmaceutical sciences, for industry as well as for academia, prompted the School of Pharmacy to establish a new five year program for a small group of hand-picked excellent students, that will lead directly to a Master's degree in science and grant a license in pharmacy.

#### **Faculty of Dental Medicine, Prof. Adam Stabholz, Dean**

The Dental Faculty is socially committed. One of its inherent roles is service to the community. Hence, the Dental School took upon itself to implement a dental program to the missiles' stricken Sderot community. Twice weekly a dentist and dental assistant provide free of charge orthodontic, endodontic and dental-hygiene care, at a clinic in Sderot.

The establishment of the Institute of Dental Sciences has proven itself in many respects. While the independence of the individual laboratories was not violated, mutual interests concerning subjects of teaching, research of the different dental scientific issues, lab spaces and shared research instruments have been enhanced and improved to the benefit of all.

The Institute of Dental Sciences is conducting research projects and teaching programs with broad international scientific recognition. The Chairman, Prof. Jona Sela, says that collaborative projects are designed with clinical departments as well as with other academic institutes here and abroad. Members of the Institute succeeded in developing innovative methods for treatment of oral diseases. Research efforts have led to the discovery of new genes, proteins, growth factors and enzymes. Specifically, the research focuses on regulation of bone formation and mineralization, implant osseointegration, novel oral drugs and delivery systems, biofilm and the etiology of dental caries and periodontal diseases, pain and sensation in the

craniofacial complex, diagnosis of oral cancer and gene therapy in bone repair and dental medicine.

For the past ten years The D. Walter Cohen Middle East Center for Dental Education has promoted collaborative work in dental medicine for the benefit of the peoples in the region. Among its outreach programs were training courses for dentists from many countries. Collaboration with the Al-Quds University Dental School was launched where advanced Israeli specialists will train graduate students from this University. In addition, a series of seminars was instituted with students from both Dental Schools and collaborative research projects have begun and have received international backing.

The above program led to the first Middle East Symposium in Dental Medicine in November 2006 in Jerusalem with the participation of several hundred Israeli and Palestinian dentists, faculty and students. The Second Middle East Dental Symposium in 2007 was held in Antalya, Turkey, on the topic “*Clinical and Aesthetic Aspects in Comprehensive Dental Care*”.



Constantly looking for ways to improve the infrastructure of the school, two additional floors were inaugurated in 2007. This included a much needed 250 seat state-of-the-art auditorium and will include a Center for Esthetic Dentistry and Clinical Research, a computerized simulator laboratory for pre-clinical studies, a research laboratory and conference and seminar rooms.

**Faculty of Agricultural, Food and Environmental Quality Sciences,  
Prof. Eli Feinerman, Dean**

The Faculty offers about 500 annual courses through 15 study programs, to its 1,250 undergraduate students, 400 Master's students, 370 Ph.D. students, and 180 DVM (Doctors of Veterinary Medicine) students.



In 2007, the Faculty has postulated its vision: to develop and disseminate innovative, daring and broadly applicable methods for providing sufficient healthy food, in a sustainable manner, to an ever hungrier planet, all this while preserving the environment. In order to realize this vision, the Faculty started implementing a strategy to assemble its collective expertise around four pillar Institutes: The Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture; The Institute of Biochemistry, Food Sciences and Nutrition; plus two new institutes – The Institute of Environmental Sciences and Natural Resources in Agriculture and The Complex of Animal Sciences and Veterinary Medicine.

In addition, to further facilitate and fuel integrative and interdisciplinary approaches, the Faculty will establish four new interdisciplinary research centers that will focus on: basic agricultural sciences; nutrition and functional foods; sustainable animal health and husbandry, and environmental protection, sustainability and bio energy.

The implementation of this ambitious plan will create solid foundations for collaborative research across the entire agriculture, food and environmental sciences continuum. It requires the recruitment of top young scientists, renovation of old laboratories and teaching and research facilities, and the addition of new physical infrastructure and equipment. Most faculty are involved in the process which benefits from the moral and financial support of the Honorary Chairman of the University's Board of Governors, Mr. Robert H. Smith. Steering committees have been established for each of the two new institutes and the four new research centers, and the physical planning of the new infrastructure has already begun.

This year a new teaching program in **Nature Conservation and Management** has been established. As urban and industrial growth impinges on natural areas which include forests, woods, pasture, dunes, rivers and parks, there is a clear need to train professionals in the management of this valuable resource which has an important social and economic role in modern society. Students in this new study program gain expertise in various aspects of nature conservation, with an emphasis on applied and restoration ecology. The program trains and educates the future professionals active in nature conservation in the country, and since its inception has already attracted more than 40 students.

A new program has been opened in **Agricultural Economics & Management with a Specialization in Biotechnology** (BSc). In this program students will acquire knowledge in Agricultural Sciences, Biotechnology, Economics, Business Management, Law and Ethics, and will be exposed to initiatives and development processes thus facilitating the transformation of ideas into a business. The program aims at training cadres of professional leaders for the Bio-Hi-Tech Industry. Graduates of the Program will initiate/join projects with the aim of developing tools to materialize new inventions and establish economically viable businesses.

Furthermore a program has opened in **Business Administration for Students of Agriculture** (BSc, MA). This program aims at training agronomists in Business Administration. During their studies at the Faculty of Agriculture, students will learn the introductory courses needed for the MBA. Graduates will acquire the tools to understand the structural changes that evolve on the existing and developing agricultural market in the modern business field.

In November 2007, the International Center for Agriculture in Semi-Arid Areas, donated by Robert H. Smith and his family was inaugurated. A state-of-the-art greenhouse complex suitable for in-depth basic research is now available for research aimed at providing high quality food and a safe environment.

## The Koret School of Veterinary Medicine



**Prof. Shimon Harrus** was elected as the new Director of the Koret School of Veterinary Medicine replacing Prof. Gadi Glaser in October 2007. Prof. Harrus received his Doctor of Veterinary Medicine (DVM) degree in 1991 at the Koret School of Veterinary Medicine in the Hebrew University's Faculty of Agricultural, Food and Environmental Quality Sciences. In 1995, he was certified as a specialist in

internal medicine of companion animals, and in 1998 completed his doctorate at the School of Veterinary Medicine Utrecht, The Netherlands. In 2003, he was certified as a Diplomate of the European College of Veterinary Clinical Pathology (ECVCP). His research focuses on the pathogenesis of vector-borne diseases, and he is recognized as a world expert on canine ehrlichiosis.



Both, the development of the School as a center of knowledge and excellence in veterinary medicine, and its integration in the Faculty of Agricultural, Food and Environmental Quality Sciences, continue. "Our main aims are to provide excellent training to veterinary students, graduate students and veterinarians in Israel, to administer world standard medical treatment to sick animals and advanced preventive measures against animal and human diseases, and to perform cutting-edge research in veterinary and associated medical and food production topics important to Israel, the Middle East and

the entire world, towards becoming a leading institute in veterinary medicine" says Prof. Harrus.

In November 2007, an international review committee chaired by Prof. Alan Kelly, former dean of the School of Veterinary Medicine University of Pennsylvania, evaluated the School. The committee was impressed by the great improvements made by the School since the last review (1997) and stated: "The committee applauds the leadership of the University, the School Administration and the Academic Staff for the remarkable progress that has been made". However, the School is still growing and developing and needs further investment in order to become one of the world leading schools.

By the end of 2009, the construction of two additional floors at the School's research building will be completed. The facility will thus become an integral part of the Complex for Animal Science and Veterinary Medicine. The increase in research laboratory space will significantly contribute to the future development of the Koret School for Veterinary Medicine.

### **Rothberg International School, Prof. Yonata Levy, Provost**



**Prof. Yonata Levy** was appointed as the new Provost of the Rothberg International School for the year 2007/2008 – 2009/2010, replacing the outgoing Provost, Prof. Jaime Kapitulnik. Prof. Levy's research interests are application of advanced imaging techniques to study brain-language correlates in children with neuro-developmental disorders

(autism, developmental delay, Williams Syndrome), longitudinal follow-up of language development in toddlers with neuro-developmental disorders, and reading in children with these disorders.

The Rothberg International School, located on Mount Scopus, reflects the magical weave of Jerusalem. It offers a broad variety of courses in the English language for Bachelors and Masters degree students, external students, for those with special expertise, and for high school graduates with foreign matriculation certificates. The courses combine academic excellence with practical experience in the material. Studies and teaching went on as usual throughout the lengthy senior academic faculty strike.

2,547 students from sixty-five counties are currently enrolled in the various programs offered by the School. The decrease in the number of students in the preparatory classes at the Rothberg International School, from 275 to 226, this year reflects the decline in immigration to Israel.

A new, international, two-year Master's degree program in Community Leadership and Philanthropy studies began this year with 14 students from a variety of countries including the United States, Jordan, Russia, Argentina and Norway. The program held in conjunction with the Paul Baerwald School of Social Work and Social Welfare (see page 38) aims at training students in the management of non-profit and communal organizations and in the rapidly developing area of philanthropy studies. The program includes courses on perspectives on civil society, empowerment and professional practice, fund raising and public boards of directors. In the course of the program, students will have the opportunity to engage in specific hands-on projects with non-profit organizations in Israel.

Supervised by the heads of the Masters programs, the one-year program for undergraduate students will be revised towards the coming year. An academic committee composed of senior faculty of the University will guide and direct the program. Courses in psychology, history, and research methods were added. The number of senior teaching staff will be increased in the coming year thus reducing the number of external teachers.

This summer for the first time, the School, in conjunction with the Israeli Center for Psycho-Trauma, will provide a program on "Trauma and Coping – the Israeli Experience". The course is designed for students and professionals in the fields of psychology, medicine, law, social work and community work.



In the coming year the study programs will be expanded to include a Master's degree program in Jewish Education, including a certificate for teaching Hebrew as a second language.

The School is now examining the possibility of developing individual tracks within the framework of the Master's degree studies that will enable outstanding students to write a Master's thesis and become doctoral candidates in the relevant departments.

Beginning in the coming academic year the Rothberg International School will invite well-known guest lecturers from excellent universities around the world. Each semester the School will host one such lecturer to teach in both the undergraduate and the graduate programs and also lecture to the University community. In addition, Lady Davis and Fulbright Foundations visitors as well as senior academics and artists in Israel will be invited to lecture at the School.

## **THE UNIVERSITY OF THE JEWISH PEOPLE**

The Hebrew University prides itself on its variety of activities in promoting research and academic education in all fields of Arts and Sciences. Special attention is given to both Judaic and Israel studies. In addition to the University's teaching and research Departments and the Jewish National and University Library with its unique collection of scripts, printed matter and vocal recordings, there are many institutes and centers dealing with these topics, including: the Mandel Institute of Jewish Studies, The Institute of Contemporary Jewry, The International Center for University Teaching of Jewish Civilization, the Chais Center for Jewish Studies in Russian, The Nevzlin Center, the Melton Center, the Rothberg International School, The Cherrick Center for the Study of Zionism, the Yishuv and the State of Israel, The Vidal Sassoon International Center for the Study of Antisemitism, Misgav Yerushalayim, The Ben-Zion Dinur Research Institute for Jewish History, The Jewish Oral Traditions Research Center, The Orion Center for the Study of the Dead Sea Scrolls, the Shaine Center for Research in the Social Sciences, the Levi Eshkol Institute for Economic, Social and Political Research, the Israel Matz Institute for Research in Jewish Law, the Revivim Program for training teachers of Jewish studies for secular schools, and many more. In addition, the Department of Geography at the Faculty of Social Science maintains a Jerusalem virtual library – the academic database on historic Jerusalem; [<http://www.jerusalem-library.org/>], holy land maps [<http://www.jnul.huji.ac.il/dl/maps/pal/html/>] and courses are offered at the faculty of Law on Hebrew/Jewish Laws; at the Faculty of Agriculture on *Kashrut* and *Shmita* and in the Faculty of Medicine on issues in Medicine and Judaism, and more. One of the most prestigious research programs on Judaic studies is carried out in Scholion, an inter-disciplinary research center within the Mandel Institute of Jewish Studies.

## **The Mandel Institute of Jewish Studies**

On Hanukah in December 1924, the Institute of Jewish Studies was established as the first Institute of the Hebrew University, which would be officially opened only in April 1925. Since that time, the Institute has been responsible for coordinating all the teaching departments and research centers devoted to the pursuit of Jewish Studies at the University, and it also oversees the publication of a wide variety of journals and periodicals representing a broad range of academic disciplines.

The Mandel Institute for Jewish Studies, headed by Prof. Aharon Maman, consists of eight teaching departments with a combined student body of around 1,100 students pursuing undergraduate, graduate and doctoral degrees. There are 15 research centers and teaching centers operating under the auspices of the Institute. A few are mentioned here:

**Scholion** – Interdisciplinary Research Center in Jewish Studies. Established some six years ago, Scholion conducts a range of multiyear research activities on an interdisciplinary basis. Its principle objective is to bring the field of Jewish Studies to prominence amidst the active cultural dialogue taking place in Israel and around the world by presenting it within the integrative context of interdependent societies and cultures.

**The Hebrew University Bible Project** is producing a critical edition of the Bible, based on all available information, in printed or manuscript form, from both Jewish and non-Jewish sources. To date, the books of Isaiah, Jeremiah and Ezekiel have been published. The Project also publishes *Textus: Studies of the Hebrew University Bible Project*.

**The Jewish Oral Traditions Research Center** maintains an archive of around 4,000 hours of recordings of traditional readings of classical Hebrew and Aramaic texts, as well as recorded material on Jewish languages from 150 communities from all over the world. The material is at present undergoing digitalization.

**The Orion Center for the Study of the Dead Sea Scrolls**, aims to stimulate and foster research on the Scrolls. In particular, the Center is involved in the great task of integrating the new information gained from the Scrolls into the body of knowledge about Jewish history and religion in the Second Temple period.

**The Ben-Zion Dinur Research Institute for Jewish History** promotes research in Jewish History from the biblical to contemporary eras in both Israel

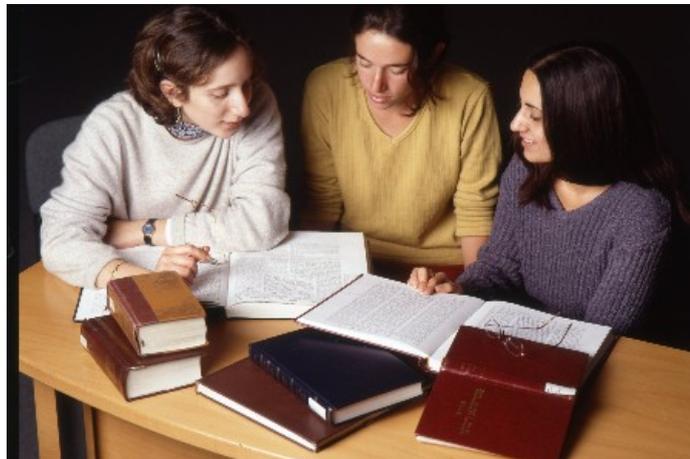
and the Diaspora. It serves as an umbrella for centers for research of Jewry in different parts of the world, such as Poland, Holland, Hungary and Rumania.

**The Chais Center for Jewish Studies in Russia**, aims, *inter alia*, at encouraging Jewish and Israeli studies at Former Soviet Union universities with the support of Hebrew University faculty, and training teachers for Jewish education in the Former Soviet Union. This year thirty-two Israeli lecturers sent by the Chais Center taught a total of forty-five full semester courses in Moscow and St. Petersburg as well as a number of mini-courses.

**The Leonid Nevzlin Research Center for Russian and East European Jewry** provides multi-disciplinary research of Russian and East European Jewish history and heritage by attracting visiting scholars from abroad and sponsoring international conferences, symposia, publications, lectures and seminar courses.

**The International Center for University Teaching of Jewish Civilization** is committed to strengthening the academic teaching of Jewish studies in a global perspective through programs for the mutual enrichment of university teachers from all over the world.

The Mandel Institute of Jewish Studies publishes a wide range of **scholarly prominent journals** in the various disciplines of Jewish studies. “*Tarbiz – A Quarterly for Jewish Studies*” is the principal and most prestigious global forum for the expression of the most important developments over the entire range of Jewish studies in our generation. In addition there are academic journals in Hebrew literature, Jewish folklore and Jewish thought, Jewish languages, the study of Jews in various lands, aspects of the Bible and history of the Jewish people.



The Institute's **Seminar Series** brings together faculty and students for scholarly discourse to increase academic cooperation among them and attract other scholars to join the discourse.

An Interdisciplinary Course in Jewish Studies for the General University Community comprises a series of lectures delivered by Institute members on various aspects of a topic selected each year by the Institute, including titles such as: Jerusalem – Historical and Cultural Perspectives; The Nation Shall Not Dwell Alone; Judaism and Gender (this topic is offered biennially); Journeys and Travelers in Jewish History; and Judaism – Streams, Sects and Movements from Biblical Times to the Present. These courses generate much interest, and are extremely well attended by a wide range of students.

### **The Avraham Harman Institute for Contemporary Jewry**

Under the leadership of Prof. Eli Lederhendler, the Institute prides itself on taking a global view of Jewish communities - the 'view from Mt. Scopus' being a unique vantage point for seeing the Jewish world in a comparative perspective. The teaching program in Contemporary Jewry bears the responsibility of informing young Israelis of the culture, status, achievements, and needs of Jews around the world.

Pioneering work by Institute scholars in the various fields of Contemporary Jewish studies has been consistently at the pinnacle of academic innovation including such areas as Holocaust studies (recognized by the conferral of an Israel Prize on Prof. Emeritus Yehuda Bauer); in Jewish literary studies (recognized by the award of the especially coveted Guggenheim Fellowship in the Humanities to Prof. Sidra DeKoven Ezrahi); and Jewish demographic studies (recognized by the conferral of the prestigious Marshall Sklare Award for Distinguished Scholarship to Prof. Sergio DellaPergola).

The Institute brings together junior and senior faculty with graduate students in a select cluster of research centers (<http://icj.huji.ac.il/research.asp>). Over the past seven years alone, the Institute has produced 31 new Ph.Ds, whose interdisciplinary training and high achievements earned them a rightful place in highly competitive post-doctoral programs all over Israel.

The Institute's major publication, *Studies in Contemporary Jewry*, recently published its 22<sup>nd</sup> annual volume and continues to lead the field as an international review of current research.

## **The Melton Centre for Jewish Education**

Established in 1968, The Melton Centre for Jewish Education represents the University's commitment to the advancement of Jewish education worldwide. This year, the Centre opened two new MA specializations: one in Pluralistic Jewish Education, designed to attract principals, senior teachers and educational administrators at the forefront of efforts to develop pluralistic Jewish education in Israel; the other in Bible Instruction, that imparts the pedagogic and didactic expertise and academic research skills needed for teaching Bible in schools.

Currently the Center trains 156 graduate students, including 30 Ph.D. candidates. In addition, the Centre sponsors international conferences on Jewish education. This year, scholars, thinkers and educators met in an effort to develop a theoretical foundation for the field of Israel education that is congruent with the life experiences of young Jewish people around the world today. In addition, an intensive 4-day “Advanced Seminar for (Diaspora) Day School Leaders” was convened with 30 school heads and lay to help participants develop a sense of the Jewish purposes of their schools through a process of learning [<http://melton.huji.ac.il/>].

The Centre is currently hosting 44 senior educators in 3 Professional Development Programs and has educational projects and consultations in numerous locations around the world, with special programs in North America, Latin America, Europe, Australia, and Israel.



Participants in Melton's three current Professional Development Programs

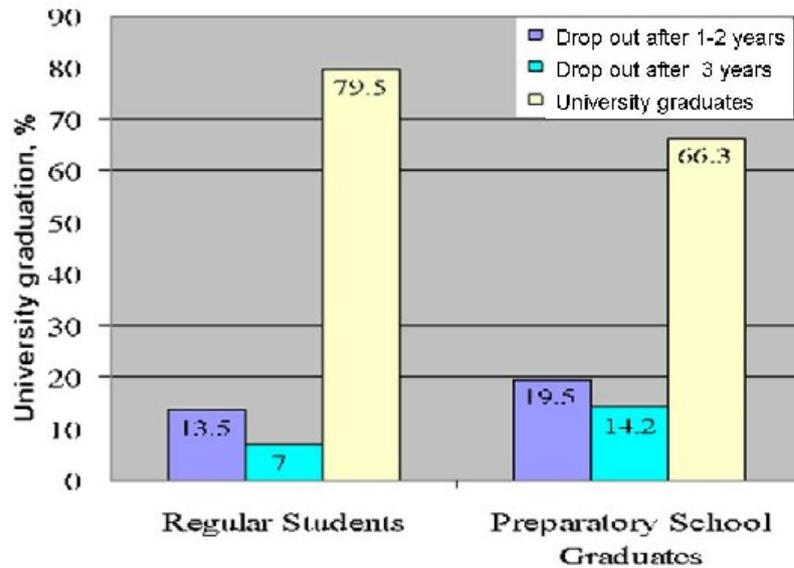
## The Joseph Saltiel Center for Pre-Academic Studies



**Prof. Uri Bialer** was appointed Academic Head of the Saltiel Center for Pre-Academic Studies (the *Mechina*), replacing Prof. Ruth Sperling. Prof. Bialer holds the Maurice B. Hexter Chair in International Relations – Middle East Studies at the Hebrew University. He had also taught at the University of Chicago and at Monash University and was a Visiting Research Fellow at St Antony's College Oxford, at the British Academy in London and Harvard University. After earning his Ph.D. in international relations at the London School of Economics, he served as Senior Research Officer at the Israeli Foreign Ministry. His publications include *The Shadow of the Bomber*, *Between East and West*, *Oil and the Arab-Israeli Conflict* and *Cross on the Star of David: The Christian World in Israel's Foreign Policy*.

Founded in 1963, **The Joseph Saltiel Center for Pre-Academic Studies** (*Mechina*) offers a preparatory program to give youth a second chance if for any number of reasons they did not succeed in fulfilling their intellectual potential in high school. A poor matriculation certificate or none could result from a variety of reasons: economic, periphery areas with poor education facilities, immigration from other countries, teenage difficulties, etc. The Center provides superb learning conditions in small classes on a high level, with special attention, understanding, assistance, tutoring, counseling and encouragement from the devoted and skilled teachers, counselors, and administrative staff, headed by the Academic Head, Prof Uri Bialer and the Administrative Director Ms. Liat Mayberg. Over 70% of its students are then admitted at the Hebrew University and an additional 20% at other institutions of higher education.

The Center offers a number of study tracks including Humanities and Social Sciences, Science, Chemistry-Biology, Pre-engineering and Behavioral sciences. In addition, the Center would like to develop a special program for students with learning difficulties. This year 450 students study in the Center. Prof. Bialer feels it is important that the University reaches out to more candidates in the periphery areas and in low socio-economic segments of society. In consultation with its *alumni*, the Center is now considering means, other than recruiting candidates by speaking in various schools, to reach the families of potential students.



A comparison between students admitted in the regular track and *Mechina* graduates. Taking in account the significant initial differences, it shows that a considerable number of these students make it thanks to the second chance opened to them and the preparation for academic education.



Students who received the *Mechina's* Prize for Excellence

## **The Harry S Truman Institute for the Advancement of Peace**

This year the Truman Institute celebrates the 40<sup>th</sup> anniversary of its establishment and the 60<sup>th</sup> anniversary of President Truman's recognition of the State of Israel. To mark the occasion, the Truman Institute is holding two special events: An international academic conference on May 29<sup>th</sup> titled "Harry S Truman, the State of Israel and the Quest for 2008 Peace in the Middle East"; and on June 1<sup>st</sup>, a Peace Event titled "The Quest for Peace in the Middle East", a dialogue between leading political and diplomatic figures followed by a lunch with the President of Israel, Mr. Shimon Peres as Guest of Honor.

The Truman Presidential Museum and Library in Independence, Missouri, is sending an exhibit marking the 60<sup>th</sup> anniversary of Truman's decision to recognize the State of Israel, "Truman and Israel" will be on display at the Truman Institute. It focuses on President Truman's decision to offer *de facto* recognition of the State of Israel, which gave immediate legitimacy to a country that until then existed only on paper and in the hearts of the Jewish community worldwide.

The Truman Institute provides scholarships to doctoral and post-doctoral students on a variety of relevant topics. The main topics these year include: Palestinian youth culture in Jerusalem; a comparative examination of the political discourse regarding human rights that developed in Egypt, Jordan and the Palestinian Authority; The expansion of higher education in the Palestinian territories in the shadow of protracted economic, social and political crisis; The role of multinational peace operations in the Middle East peace processes; The politics of commemoration in the Arab Middle East in the 20<sup>th</sup> century; A study exploring the dynamic relations between Israel and the Palestinians in the territories during the years 1967-1994; The social construction of silence; State, society and transnational networks: Arab volunteers in the Afghan War 1980-1989; Sectarian and ethnic divides and the prospects for democracy in Iraq; and also studies on "living development" in Africa; on Cultural-Industrial Aspects of Japan's presence in Southeast Asia since the end of World War II; China's attitude towards terrorism; Coptic identity between Islamization, Arabism and Egyptian nationalism; and a study on the influence of external incentives on beliefs and policies regarding intractable conflicts through analysis of case studies of Turkey and Israel, and more.

The Truman Institute sponsored two research projects this year on: the Golan between Syria and Israel; and on "Tracking Public Opinion in the Israeli-Palestinian Conflict and Conflict Resolution Efforts".

Research groups of four to eight researchers study issues of: Gender, space and forms of domination in the Middle East; African Labor in national and transnational contexts; Iran in global perspectives; the future of unity or disintegration in Iraq; the Arab minority, the Jewish majority and the State of Israel; and religious actors in conflict areas.

### **Gender Issues**

In my first term of office, I appointed a committee headed by Prof. Eliezer Rabinovici to study gender composition at the University. At that time the gender distribution of Ph.D. degree recipients was 40:60 and among senior academic staff at the Hebrew University 19:81 women to men, respectively. The Committee recommendations to correct the existing situation began with measures for students through all stages of study and employment, post doctoral training and faculty, as well as construction of physical facilities.

All of the recommendations of the Committee have been adopted and implemented, starting with publication of a declaration of gender equality at the University and including: establishment of a permanent committee on gender issues; setting up special rooms for caring for babies on the campuses, expanding the nurseries and activities for young children at the University, and a babysitting service on the campuses; setting up a “gender” site on the University’s web site; allocating scholarships for women students going for post-doctoral training; creating a supportive atmosphere on the various campuses including meetings of the special advisor to the President with all women students for advanced degrees; and meeting with appropriate officials regarding sexual harassment and publication and distribution of a pamphlet on this subject to all. Prof. Rachel Elior was appointed as a consultant to the President on gender issues and also chairs the Committee for Gender Issues [[http://www.huji.ac.il/huji/eng/info\\_gender\\_e.htm](http://www.huji.ac.il/huji/eng/info_gender_e.htm)]

Prof. Elior reports that in the past year efforts were made in various areas including:

- Promotion of cooperation regarding gender issues between the academic and administrative staff;
- Promotion of gender thought related to strengthening women, through a series of meetings and lectures with various groups at the University;
- Meeting with the students in the graduate programs in the Federmann School of Public Policy to promote closing the gender gap in the public areas;
- Strengthening women in the administrative staff through a series of lectures;
- Sessions were held on the subject of prevention of sexual harassment.

- Planning meeting with advanced women students in the Faculty of Law for preliminary discussion concerning changing laws of personal standing in Israel which are based on gender discrimination;

Today, the gender distribution of Ph.D. degree recipients at the Hebrew University is 55% women and 45% men, a major change from the data just seven years ago. However, the gender ratio among new appointments lags far behind (out of 49 new appointments in the past year, only 11 were women). A proposal was made to track gender data in the process of selection among academic candidates in the various faculties, thereby emphasizing this aspect without compromising on the criteria of excellence. Consideration is being given to holding workshops to provide women with information about developing academic careers.



### **The Authority for Research Students**

The Authority for Research Students, chaired by Prof. Yoram Bilu, together with Prof. Bat-Sheva Kerem handles all aspects for Ph.D. students at the Hebrew University from acceptance through guidance, to reviewing and acceptance of their dissertation.

Being a research University, an emphasis was given in the last 7 years to improve the ratio of graduate to undergraduate student populations. Hence, despite the down sizing of faculty population, the number of University's research students has been growing at a small but steady pace (Table 1). The effect of the strike on the delay in graduation (both undergraduate and

masters students), however, is evident, and enrollment of graduate (Ph.D.) students in 2008 is somewhat slower than in previous years. The annual number of graduates went up from the figures in 2000 and in current years it is around 300 (Table 2).

**Table 1. Change in the Number of Doctoral Students in the academic years 2001/02 to 2007/08 in the experimental and non-experimental Faculties**

Year	2001-2	2002-3	2003-4	2004-5	2005-6	2006-7	2007/8
Experimental Faculties	1048	1061	1282	1411	1542	1599	1578
Non-experimental	1158	1190	1142	1184	1174	1174	1086
Total	2206	2250	2424	2595	2716	2773	2664

**Table 2. Number of recipients of PhD degrees in the years 2001/02 – 2007/08**

Year	2001-2	2002-3	2003-4	2004-5	2005-6	2006-7	2007/8
Total	277	280	268	311	284	305	307

In terms of gender, the student population now is roughly equally divided. Note that the contribution to the growth in our graduate student population comes from the experimental faculties. There is no similar increase in the non-experimental faculties. Note also that in recent years (notwithstanding 2008) female students have been overrepresented among our graduates (Table 3).

**Table 3. Gender Distribution of Graduates (%) in the academic years 2003/04 to 2007/08**

Year	2003-4	2004-5	2005-6	2006-7	2007-8
Male	56	49	47	46	55
Female	44	51	53	54	45

The Authority for Research Students has instituted standard prerequisites for admission across all faculties (threshold grade for acceptance in all

components of M.A. studies is 85). The category of pre-doctoral students (*Mitmahim Le-Mehkar*) was significantly reduced. M.A. graduates without thesis can no longer be admitted, before they complete their thesis in the respective faculties. Furthermore, differences in the evaluation procedures of Ph.D. dissertations in the experimental and non-experimental faculties were reduced, in terms of time-tables and evaluation forms.

The evaluation procedure of Ph.D. dissertations at the Hebrew University has been traditionally based on written reports of referees. Given the lengthy duration for completing the evaluation (more than 7 months, on the average), an alternative procedure, based on oral defense, is being examined in the experimental faculties. The new procedure was suggested as an option for a 2-year trial period.

An ambitious project for automating all the work processes in the Authority is currently being implemented. With the help of the University's Information Technologies and an external source, a special software has been adopted thus making the routine work more effective, in terms of paperwork, time-tables, and communications with students, advisors, committees, and referees.

In contrast to any planning logics, the budgetary formula of the Government's Planning and Budgeting Committee encourages Israeli universities to endlessly increase the numbers of their PhD students. While the Hebrew University still boasts 25% of the total number of doctoral students in Israel, this proportion is going down systematically since we made a decision to maintain our standards and qualitative edge by attracting only the most brilliant candidates available to our Ph.D. programs. To this end we have to increase significantly the quota of multi-annual scholarships for doctoral students, and to start building a structured body of doctoral studies. Some steps in this direction have recently been initiated in the non-experimental faculties, where these problems are more vexing (See page 36).

The average duration of doctoral studies at HU went down in recent years and yet it amounts to 6 years and 8 months for this year's (2008) graduates. Note that the formula of the Planning and Budgeting Committee for rewarding the universities for doctoral students is based on a significantly shorter period: 4.5 years. Aside from adequate scholarships that will enable the recipients to devote most of their time to research, we should find ways to make the "direct Ph.D. path" program (*Maslul Yashir*) more accessible to graduate students (see page 11). This trajectory is supposed to shorten the overall period of doctoral studies by sparing them from completing a full-fledged M.A. thesis.

## Academic Cooperation

The *Erasmus Mundus* program is a co-operation and mobility program in the field of higher education which promotes the European Union as a centre of excellence in learning around the world. It supports European top-quality Masters Courses and enhances the visibility and attractiveness of European higher education in developing countries. It also provides EU-funded scholarships for developing country nationals participating in these Masters Courses, as well as scholarships for EU-nationals studying at Partner universities throughout the world.

For the past 20 years the Erasmus Student Exchange Program has been running very successfully within European Countries. In its framework, tens of thousands of students study in universities all over Europe.

In 2006, EU extended the Exchange Program - to foster cooperation in the field of higher education between the EU and 9 surrounding geographic zones. One of the zones is the Middle East and it includes Israel.

- This year we sent 38 Bachelor, Master & Doctoral Students in this program to Belgium, Spain, Turkey and Poland.
- They are divided into three groups: Law students and those learning at the Center for European Studies have programs specially tailored for them. The third group consists of individuals learning in other disciplines such as: Economics, Political Science, International Relations, Hispanic Studies, Computer Sciences and Agriculture.
- We at the HU have 5 students from Spain, Italy, Belgium and Poland, studying Anthropology, International Relations, Law, Jewish History and Hebrew Language.
- The Hebrew University promotes this program as it opens many doors of opportunity for our students to study abroad, and to have students from overseas at the Hebrew University.

In addition to this new European program, the Hebrew University actively operates numerous agreements with leading universities throughout the world (including Canada, USA, many European countries, Australia and more). Most of these agreements were signed with the aim of promoting exchange of students and faculty, and as a result, dozens of students from the Hebrew University study abroad and dozens of students from abroad come to study at the Hebrew University.

## In Memory

During my term, we experienced many acts of terror. I would like to end my report by remembering our nine students and staff murdered on Mt Scopus on July 31, 2002: **Revital Barashi, Marla Bennett, Benjamin Blutstein, Dina Carter, Janice Ruth Coulter, David Gritz, David (Diego) Ladowsky, Levina Shapira, Daphna Shpruch**; and our students and staff killed in terror activities in Israel: **Rephael Berger, Anat Darom, Tali Eliahu, Dr. Shmuel Gillis, George Khoury, Yona Melina and Orit Ozarov**; and **Gilad Balchasan** killed in the war in Lebanon.

Let their memory be blessed and stay with us forever.



Memorial ceremonies on Mount Scopus

### **In appreciation**

I would like to thank the President of the University, Prof. Menachem Magidor, the Vice-Rector, Prof. Miriam Gur-Arye, the Vice Presidents: Prof. Herve Bercovier, Mr. Elhanan Hacohen, and Mr. Carmi Gillon, Deans of the Faculties: Prof. Gail Auslander (Social Work); Prof. Israel Bartal (Humanities) Prof. Yoav Dotan (Law), Prof. Eli Feinerman (Agriculture), Prof. Tsvi Piran (Business Administration), Prof. Ehud Razin (Medicine), Prof. Boas Shamir (Social Sciences), Prof. Hermona Soreq (Science), Prof. Adam Stabholz (Dental Medicine), Prof. Esther Shohami (Dean of Students), Prof. Yonata Levy (Provost, Rothberg International School), Prof. Michael Ben Or (Director, School of Computer Science and Engineering), Prof. Shimon Harrus (Director, Koret School of Veterinary Medicine), Prof. Philip Wexler (Director, School of Education), Prof. Israel Ringel (Director, School of Pharmacy), Prof. Uri Bialer (Director, Saltiel Center for Pre-Academic studies), Prof. Joseph Orly (Head of the Authority for Animal Facilities), Prof. Danny Dolev (Chairman, Authority for Computation, Communication and Information), Prof. Jacob Metzger (Chairperson, Library Authority), Prof. Yoram Bilu (Chairperson, Authority for Research Students), Prof. Moshe Pollak (Head of the Academic Planning Unit), Prof. Israel Gilead (Chairperson, Professional Advisory Committee for Evaluation), Prof. Daniel Schwartz (Chairperson, Committee for Teaching and Study Regulations), Ms. Billy Shapira (Head of Student Administration Division). The staff of the Academic Secretariat headed by Academic Secretary Joel Alpert, the staff of the Academic Planning Unit, Ms. Galia Dolmatsky, and the staff of my Office headed by Ms. Yochi Baron: Ms Bruria Aharoni; Ms. Yafa Eliyahu; Ms. Sigal Cohen; and Ms. Frances Neumark, are due a special thank you.

The support and assistance of all these, as well as so many others that I worked with throughout the University over these past seven years, is absolutely invaluable and enormously appreciated. Without their friendship, cooperation and good will I would not have been able to achieve the accomplishments of these seven years.

Prof. Haim D. Rabinowitch  
Rector

REPORT BY THE VICE PRESIDENT  
FOR RESEARCH AND DEVELOPMENT



## **RESEARCH AND DEVELOPMENT**



The Sherman Building for Research Administration  
Edmond J. Safra Campus, Givat Ram

As Vice President for Research and Development, I am proud to be part of the Hebrew University of Jerusalem, an institution wholeheartedly committed to the Israeli society and Jewish people and determined to continue to pursuit scientific excellence for the benefit of science and the well-being of mankind.

Research has always been the cornerstone of the Hebrew University of Jerusalem and the source of its creativity. For over 80 years our researchers have not only carried out basic research, but have also responded to the need for research that can be applied to achieving goals of national importance. The University is justly proud of its position at the cutting edge of world science.

More recently its scientists have turned to conducting innovative research which has created new directions for Israel's science-based industries. Its researchers publish widely in leading international scientific and scholarly journals, conduct joint research projects with noted scholars from other countries and compete successfully for research grants from international and national funding sources.

As it has in past years, the Hebrew University of Jerusalem has again been ranked among the world's leading universities by the Times Higher Education Supplement of London. In its latest listings, for 2007, the Hebrew University was ranked overall by The Times survey in 128th place among the top 200 universities in the world. In the arts and humanities, the University

was ranked at 39th in the world. The Shanghai ranking placed our University at the 64<sup>th</sup> place worldwide.

In the following pages, allow me to take you for a brief tour up the latest avenues of research at the Hebrew University.

## THE FACULTY OF SOCIAL SCIENCES

### Are we genetically programmed to be generous?



Are those inclined towards generosity genetically programmed to behave that way? A team of researchers, including Dr. Ariel Knafo of the Psychology Department believes that this could very well be the case.

Through an online task involving making a choice whether or not to give away money, the researchers found that those who chose to give away some or all of their money differed genetically from those involved in the exercise that chose not to give their money away.

The scientists conducted the experiment with 203 online "players". Each player could choose to keep the equivalent of \$12 he was allocated, or to give all or part of it to an anonymous other player.

Those involved also provided DNA samples which were analyzed and compared to their reactions. It was found that those who had certain variants of a gene called AVPR1a gave on average nearly 50 percent more money than those not displaying that variant. The results of the study were published online recently in the research journal "Genes, Brain and Behavior".

"The experiment provided the first evidence, to my knowledge, for a relationship between DNA variability and real human altruism," said Prof. Knafo, who conducted the research along with other researchers, including Prof. R. P. Ebstein, Prof. Gary Bornstein, and Dr. Salomon Israel of the Psychology Department at the Hebrew University of Jerusalem.

The gene AVPR1a codes for the production of a receptor that enables a

hormone, arginine vasopressin, to act on brain cells. Vasopressin, in turn, has been implicated in social bonding. The researchers found greater altruism in players in which a key section of the AVPR1a gene, called its promoter, was longer. The promoter is the region of a gene that allows cellular machinery to bind to it and determine how much gene product is made. In the case of this gene, a longer promoter can result in greater activity.

The findings could help biologists sort out altruism's evolutionary history, according to the scientists. They noted that a version of AVPR1a also exists in rodents called voles, where it also promotes social bonding. This suggests that altruism has a long rooted genetic history, which may have taken on a new role during human evolution.

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### **The formula for success: more girls in the class**



School students who study in classes that comprise more than 55% girls are more successful in their studies than students in classes composed mainly of boys. This is due to girls' positive influence on the class environment, according to new research published by Prof. Victor Lavy of the Hebrew University of Jerusalem and Prof. Analia Schlosser of Princeton University.

One of the findings of the research, which was carried out among half a million school children studying within the Israeli public school system during the 1990's, reveals that high school classes with a higher proportion of girls have a higher level of scholastic achievement – reflected among both the girls and the boys. Matriculation success rates are also significantly higher than from classes with fewer girls. In addition, boys who have a higher proportion of female peers have higher enrollment rates in advanced math and science classes during high school.

In primary schools, classes with a majority of girls also exhibit increased academic success – among both boys and girls – with a noted improvement in subjects like math, science and technology. In grades 7 and 8, the main

improvement in classes with more girls is in the girls' academic level in math, languages and English.

The reason for the improvement in academic levels, according to the researchers, is the positive influence that girls have on the social and scholastic environment in the class. They found that a higher percentage of girls lower the level of classroom disruption and violence, improves inter-student and student-teacher relationships as well as students' overall satisfaction with school, and lessens teachers' fatigue.

Interestingly, however, the research shows that the higher level of scholastic achievement in classes with a higher proportion of girls is due to the gender composition of the class, and not to improved individual behavior of either the boys or girls in the class.

In order to ascertain the study level, they compared matriculation exam results, study units, and matriculation success rates in classes with different gender compositions. In order to ascertain the social and scholastic environment, the researchers compared questionnaires distributed to the students in which they asked them to express their opinion on their behavior and that of their friends toward their studies.

Understanding the effects of classroom gender composition is, say the researchers, important for assessing the consequences of imbalanced sex ratios in coeducational schools and for determining allocation of resources within and across schools. Resource allocations, they claim, must take into account the rate of boys in each year grade, in order to compensate for the negative influence of a majority of boys in a particular class on the school environment and on the effectiveness of teaching and learning. A class with a majority of boys, for example, requires a style of teaching and character of teacher to suit the gender composition.

Opening classes exclusively for girls will only take girls from mixed classes, which will negatively affect the scholastic achievements of boys. One therefore has to weigh the advantage girls get in a girls-only class versus the negative affect of boys in mixed classes with fewer girls.

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## THE FACULTY OF HUMANITIES

### Remains of ancient synagogue with unique mosaic floor found in Galilee excavations



Remains of an ancient synagogue from the Roman-Byzantine era have been revealed in excavations carried out in the Arbel National Park in the Galilee under the auspices of the Hebrew University of Jerusalem.

The excavations, in the Khirbet Wadi Hamam, were led by Dr. Uzi Leibner, Institute of Archaeology and Scholion – Interdisciplinary Research Center in Jewish Studies.

Dr. Leibner said that the synagogue's design is a good example of the eastern Roman architectural tradition. A unique feature of the synagogue is the design of its mosaic floor, he said.

The synagogue ruins are located at the foot of the Mt. Nitai cliffs overlooking the Sea of Galilee, amidst the remains of a large Jewish village from the Roman-Byzantine period. The first season of excavations there has revealed the northern part of the synagogue, with two rows of benches along the walls. The building is constructed of basalt and chalks stone and made use of elements from an earlier structure on the site.

Archaeologists differ among themselves as to which period the ancient Galilean synagogues belong. The generally accepted view is that they can be attributed to the later Roman period (second to fourth centuries C.E.), a time of cultural and political flowering of the Jews of the Galilee. Recently, some researchers have come to believe that these synagogues were built mainly during the Byzantine period (fifth and sixth centuries C.E.), a time in which Christianity rose to power and, it was thought, the Jews suffered from persecution. Dr. Leibner noted that this difference of scholarly opinion has great significance in perhaps redrawing the historical picture of Jews in those ancient times.

The excavators were surprised to find in the eastern aisle of the synagogue a mosaic decoration which to date has no parallels - not in other synagogues,

nor in art in Israel in general from the Roman-Byzantine period. The mosaic is made of tiny stones (four mm. in size) in a variety of colors. The scene depicted is that of a series of woodworkers who are holding various tools of their trade. Near these workers is seen a monumental structure which they are apparently building. According to Dr. Leibner, since Biblical scenes are commonly found in synagogue art, it is possible that what we see in this case is the building of the Temple, or Noah's ark, or the tower of Babel. The mosaic floor has been removed from the excavation site and its now in the process of restoration.

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## THE FACULTY OF SCIENCE

### Hebrew university scientist finds way to catch terrorists red-handed

A new chemical spray detector developed by Prof. Joseph Almog of the Casali Institute of Applied Chemistry detects the home-made explosive urea nitrate. When sprayed on cotton swabs taken from the hands of a suspect, if they have had recent contact with urea nitrate, the chemical will turn a blood red hue.



Urea nitrate is a powerful improvised explosive, frequently used by Palestinian terrorists in Israel. It was also used in the First World Trade Center bombing in New York in 1993. Non-professionals can prepare large amounts of this material in "back-yard" facilities, which have subsequently been used in improvised mines and in suicide bomber belts, the devastating results of which have killed over a hundred people in Israel alone.

Urea nitrate is a colorless crystalline substance that looks very much like sugar, which makes it very difficult to detect. The development of a color test will therefore be a significant aid to forensic scientists. The test is based on the formation of a red dye in the chemical reaction between p-dimethylaminocinnamaldehyde and urea nitrate under neutral conditions.

The initial findings of the project, which was supported in part by the US/Israel Bilateral Committee on Counter-Terrorism, were published two

years ago, in the Journal of Forensic Sciences. The second part of the work, carried out by research student Nitay Lemberger, involved unequivocal structure elucidation of the red dye. Besides its importance for better understanding the chemistry of urea nitrate, this may be important also in legal procedures.

Although instruments do already exist to detect urea nitrate, they are much more sophisticated and quite expensive. According to Prof. Almog, his spray can detect minute traces of the improvised explosive on hands of suspects, door handles, luggage containers and vehicles, and it can distinguish between sugar or any innocent looking powder and urea nitrate.

Prof. Almog, who says the spray detector is easy to use and inexpensive, sees it being adopted as a standard arsenal of law enforcement agencies, security services, and the military and at certain check-points at air and sea ports.

With a long history of inventing color changing test fluids for law enforcement, Prof. Almog and his team have led a great deal of groundbreaking research in past years, including the development of the chemical FerroTrace which turns purple when the user has recently held a weapon. Prof. Almog is the recipient of the Lucas Medal, the highest award of The American Academy of Forensic Sciences for 2005, "for outstanding achievements in forensic science".

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### **Bending polymers provides spontaneous way to duplicate beauty of nature**



There are many objects in nature, such as flowers, that are “pre-programmed” to develop into delicate, beautiful and intricately shaped forms. But can this pre-determined process be duplicated by man starting with plain, flat surfaces?

Yes, say Dr. Eran Sharon and his co-workers, Yael Klein and Efi Efrati from the Racah Institute of Physics, who have succeeded for the first time anywhere in programming polymer sheets to bend and wrinkle by themselves into prescribed structures.

They made flat discs of a soft gel that, when warmed gently, curved into domes, saddles and even sombrero shapes. Such switchable shape control in a soft material could have applications ranging from optics to biomedicine.

The sheets change shape because the gel — a web of cross-linked polymers — shrinks at temperatures above 33 degrees Celsius by an amount determined by the local polymer density.

When the density varies across the disc, the sheet buckles to relieve the pressure of uneven shrinkage. The researchers worked out what shrinkage patterns would produce the structures they wanted, and then used an automated mixing system to produce “cocktails” of gels with the right properties.

The principle that is the basis for accomplishing this is based on differential geometry, the same principle used by Albert Einstein in his development of the general theory of relativity. This principle, by the way, is the one that gives us the curves in potato chips, for example.

The ability to create pre-planned, spontaneously formed objects, say the researchers, can have far-reaching effects for various manufacturing processes or for creating structures that have to meet specific climatic conditions.

Dr. Sharon sees this research as having far-reaching consequences. “Our work enables the creation of highly complex structures, which sometimes would be difficult to manufacture through regular industrial means,” he said. Additionally, such research provides greater understanding of the ways in which complex structures, such as flowers, develop in nature, he added.

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### **Electronic structure of DNA revealed for 1st time**

Utilizing a technique that combines low temperature measurements and theoretical calculations, Hebrew University of Jerusalem scientists and others have revealed for the first time the electronic structure of single DNA molecules.

The knowledge of the electronic properties of DNA is an important issue in many scientific areas from biochemistry to nanotechnology, for example in

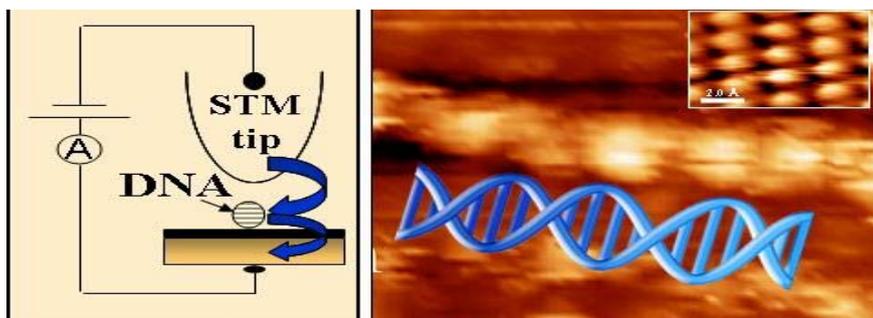
the study of DNA damage by ultraviolet radiation that may cause the generation of free radicals and genetic mutations. In those cases, DNA repair occurs spontaneously via an electronic charge transfer along the DNA helix that restores the damaged molecular bonds.

In nano-bioelectronics, which is the advanced research field devoted to the study of biological molecules (to produce electrical nanocircuits, for example), it has been suggested that DNA, or its derivatives, may become used as possible conducting molecular wires in the realization of molecular computing networks which are smaller and more efficient than those produced today with silicon technology.

The knowledge that has been acquired in this project, say the researchers, may also be relevant for current attempts to develop new sophisticated, reliable, faster and cheaper ways to decode the sequence of human DNA.

The research, published in the prestigious journal *Nature Materials*, is a result of an international collaboration. The research was conducted by Erez Shafir and coordinated by Dr. Danny Porath at the Department of Physical Chemistry and Center for Nanoscience and Nanotechnology at the Hebrew University and by Dr. Rosa Di Felice at the S3 Center of INFM-CNR in Modena, Italy. Also collaborating in the project were Prof. Alexander Kotlyar at Tel Aviv University, who synthesized the molecules, the CINECA supercomputing center in Italy, and Prof. Gianauelio Cuniberti at the University of Regensburg, Germany.

In their work, the researchers were able to decode the electronic structure of DNA and to understand how the electrons distribute into the various parts of the double helix, a result that has been pursued by scientists for many years, but was previously hindered by technical problems.



The measurement scheme (left), and a measured segment of a DNA molecule (right),

The success of this project was finally achieved thanks to collaboration between experimental and theoretical scientists who worked with long and homogeneous DNA molecules at minus 195 degrees Celsius, using a scanning tunneling microscope (STM) to measure the current that passes across a molecule deposited on a gold substrate. Then, by means of theoretical calculations based on the solution of quantum equations, the electronic structure of DNA corresponding to the measured current has been obtained. These results also suggest an identification of the parts of the double helix that contribute to the charge flow along the molecule.

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### **Humans have more distinctive hearing than animals**



Do humans hear better than animals? It is known that various species of land and water-based living creatures are capable of hearing some lower and higher frequencies than humans are capable of detecting. However, scientists from the Hebrew University of Jerusalem and elsewhere have now for the first time demonstrated how the reactions of single neurons give humans the capability of detecting fine differences in frequencies better than animals.

They did this by utilizing a technique for recording the activity of single neurons in the auditory cortex while subjects were exposed to sound stimuli. The auditory cortex has a central role in the perception of sounds by the brain.

Current knowledge on the auditory cortex was largely based on earlier studies that traced neural activity in animals while they were exposed to sounds. And while such studies have supplied invaluable information regarding sound processing in the auditory system, they could not shed light on the human auditory system's own distinctive attributes.

Experimental study of neural activity in the human auditory cortex has been limited until now to non-invasive techniques that gave only a crude picture of how the brain responds to sounds. But recently, investigators from the Hebrew University, the University of California, Los Angeles (UCLA), the Tel Aviv Sourasky Medical Center and the Weizmann Institute of Science were successful in recording activity of single neurons in the auditory cortex

while the subjects were presented with auditory stimuli. They did this by utilizing an opportunity provided during an innovative and complicated clinical procedure, which traces abnormal neural activity in order to improve the success of surgical treatment of intractable epilepsy.

The researchers included Prof. Israel Nelken of the Department of Neurobiology at the Alexander Silberman Institute of Life Sciences at the Hebrew University of Jerusalem, Prof. Itzhak Fried from UCLA and Tel Aviv Medical Center, and Prof. Rafi Malach of the Weizmann Institute of Science, together with their students Roy Mukamel and Yael Bitterman. Their work was described in an article appearing in the journal "Nature".

In tests measuring response to artificial sounds, the researchers found that neurons in the human auditory cortex responded to specific frequencies with unexpected precision. Frequency differences as small as a quarter of a tone (in western music, the smallest interval is half a tone) could be reliably detected from individual responses of single neurons.

Such resolution exceeds that typically found in the auditory cortex of other mammalian species (besides, perhaps, bats, which make unique use of their auditory system), serving as a possible correlate of the finding that the human auditory system can discriminate between frequencies better than animals. The result suggests that the neural representation of frequency in the human brain has unique features.

Interestingly, when the patients in the study were presented with "real-world" sounds – including dialogues, music (from "The Good, the Bad and the Ugly" soundtrack) and background noise – the neurons exhibited complex activity patterns which could not be explained based solely on the frequency selectivity of the same neurons. This phenomenon has been shown in animal studies but never before in humans.

Thus, it can be seen that in contrast to the artificial sounds, behaviorally relevant sounds such as speech and music engage additional, context-dependant processing mechanisms in the human auditory cortex.

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## **THE FACULTY OF MEDICINE**

### **A new peptide communication factor enabling bacteria to ‘Talk to Each Other’**

Discovery of a new communication factor that enables bacteria to “talk to each other” and causes their death could have significant consequences leading to development of a new class of antibiotic medications.

Bacteria are traditionally considered unicellular organisms. However, increasing experimental evidence indicates that bacteria seldom behave as isolated organisms. Instead, they are members of a community in which the isolated organisms communicate among themselves, thereby manifesting some multi-cellular behaviors.

In an article to be published in *The Journal Science*, the Hebrew University scientists describe the new communication factor they have discovered that is produced by the intestinal bacteria *Escherichia coli*. The new factor is secreted by the bacteria and serves as a communication signal between single bacterial cells.

The research was carried out by a group headed by Prof. Hanna Engelberg-Kulka of the Department of Molecular Biology at the Hebrew University - Hadassah Medical School. It includes Ph.D. student Ilana Kolodkin-Gal, and a previous Ph.D. student, Dr. Ronen Hazan. In addition, the research included Dr. Ariel Gaathon from the Facilities Unit of the Medical School.

The communication factor formed by *Escherichia coli* enables the activation of a built-in “suicide module” which is located on the bacterial chromosome and is responsible for bacterial cell death under stressful conditions. Therefore, the new factor has been designated EDF (Extra-cellular Death Factor).

While suicidal cell death is counterproductive for the individual bacterial cell, it becomes effective for the bacterial community as a whole by the simultaneous action of a group of cells that are signaled by EDF. Under stressful conditions in which the EDF is activated, a major sub-population within the bacterial culture dies, allowing the survival of the population as a whole.

Understanding how the EDF functions may provide a lead for a new and more efficient class of antibiotics that specifically trigger bacterial cell death in the intestine bacteria *Escherichia coli* and probably in many other bacteria, including those pathogens that also carry the “suicide module.”

The discovered communication factor is a novel biological molecule, noted Prof. Engelberg-Kulka. It is a peptide (a very small protein) that is produced by the bacteria. The chemical characterization of the new communication factor was particularly difficult for the researchers because of two main reasons: it is present in the bacterial culture in minute amounts, and the factor decomposes under the conditions that are routinely used during standard chemical characterization methods. Therefore, it was necessary to develop a new specific method. The research has also identified several bacterial genes that are involved in the generation of the communication factor, said Prof. Engelberg-Kulka.

The research on this project was supported by the Israel Science Foundation (ISF), the U.S.-Israel Binational Science Foundation (BSF), and the American National Institutes of Health (NIH).

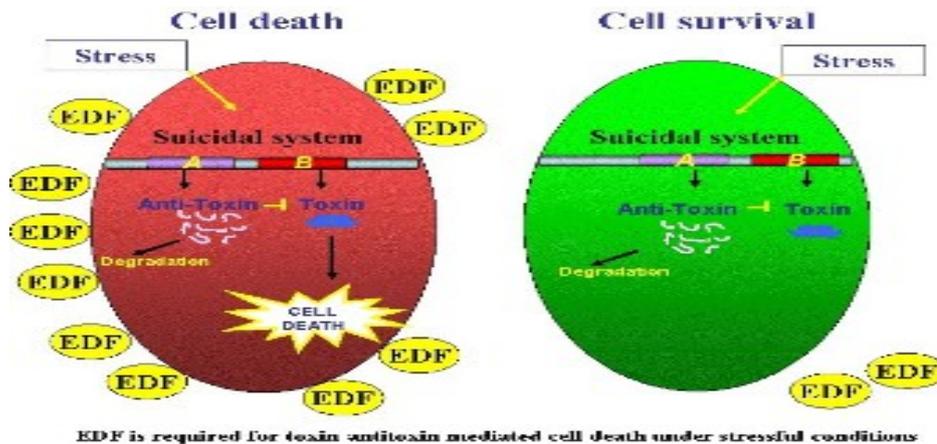


Illustration of the effects of EDF

**Brain activity measurements developed could lead to better devices to move injured or artificial limbs**

Neuroscientists at the Hebrew University of Jerusalem have developed a novel approach for measuring and deciphering brain activity that holds out promise of providing improved movements of natural or artificial limbs by those who have been injured or paralyzed.

Neuroscientists have long been working towards achieving a better understanding of the relationship between brain activity and behavior, and especially between neural activity in the motor regions of the cortex and hand movements.

In addition to addressing basic scientific questions, this line of research carries important practical implications, since the identification of precise relationships would enable neuroscientists to assist in the construction of devices through which brain signals will activate muscles in a paralyzed limb or a prosthetic (robotic) arm.

In an article recently published in *The Journal of Neuroscience*, Hebrew University neurophysiologists Eran Stark and Prof. Moshe Abeles report on their new approach for measuring and deciphering brain activity, which avoids many of the drawbacks of current methods and which provides an accurate decoding of brain activity.

Currently, two methods are being used to measure brain activity in the context of neuro-prosthetic devices. The first method is based on the EEG (electroencephalogram) and is measured either over the scalp, directly from the cortical surface, or from the cortex itself. The second method is based on the activity of individual nerve cells within the cortex, and uses intra-cortical electrodes – which essentially are fine wires.

Each method has advantages but is also subject to considerable drawbacks. To decipher brain activity at a level of accuracy that is sufficient to activate a paralyzed limb or a robotic arm, a large number of parallel and preferably independent measurements must be taken from a relatively small area (in humans, about 4 cm<sup>2</sup>). Neither of the above two methods is particularly efficient in accomplishing that.

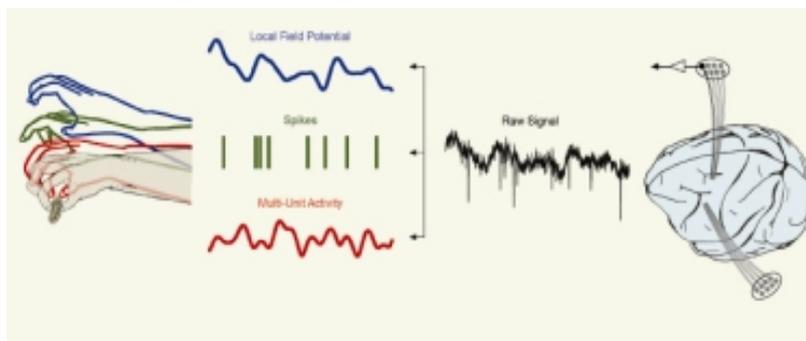
One of the particular drawbacks to the use of the EEG is that nearby electrodes record approximately the same EEG activity, so the gain from

employing multiple measurements is limited. A second drawback is that the bulk of the changes recorded in the EEG brain wave occurs after movement and not prior to it, as is required for controlling a paralyzed limb or a robotic arm.

With regard to the fine-wire electrodes, it has been found that, over time, the brain responds to the implanted electrodes by forming glia cells in a process akin to scar formation, with the consequence that a large portion of the brain wave activity is masked.

The approach taken by the Hebrew University scientists entails measuring the activity of all the nerve cells that are located at an intermediate distance (100-200 micrometers) from a recording electrode. In this way, independent measurements can be obtained from many adjacent points. Minor damage to the brain tissue in close proximity to the measurement site scarcely affects the quality of the measurement. Moreover, the measurement remains reliable over a long duration.

In testing the new approach, monkeys were trained to make prehension movements, reaching and grasping various objects located at different positions. Prehension requires coordination between the direction of reach, performed mainly by the arm, and the type of grasp, performed mainly by the fingers. By measuring the activity of populations of nerve cells as outlined above, using no more than 16 electrodes, the upcoming reach direction and grasp type could be predicted at an accuracy of about 90% and, in some cases, at a near-perfect accuracy (above 99%). The prediction errors of the proposed method of measurement were two to three times lower than the errors of predictions based on the other methods of brain activity measurement.



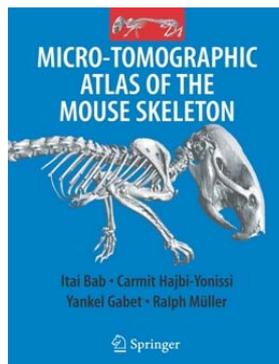
Neural activity in the premotor cortex carries information about reaching and grasping. (Art by Sandrine Alon)

The Hebrew University researchers believe that this new study constitutes a considerable step forward towards deciphering intentions to perform movements by persons who are paralyzed or are amputees, thus paving the way for creation of better instruments for converting brain activity into actual movements.

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## THE FACULTY OF DENTAL MEDICINE

### Scientists show similarities between skeletons of both mice and men



A new book by researchers at the Hebrew University of Jerusalem that details the skeletal structure of the mouse demonstrates a surprising similarity between mice and humans.

The book, "Micro-Tomographic Atlas of the Mouse Skeleton," was authored by a team from the Hebrew University Bone Laboratory consisting of Prof. Itai Bab, head of the laboratory; Dr. Carmit Hajbi-Yonissi and Dr. Yankel Gabet. Also participating in the writing of the book was Dr. Ralph Müller of the ETH of Zürich. The book, published by Springer of New York, provides great visual detail of the mouse skeletal structure, utilizing the technology of micro-tomographic imaging.

The authors observe that there are many areas of comparison between the mouse and human skeleton, with the exception of the facial, hand and foot bones. This is very important because, for example, mice, like people, suffer from osteoporosis. The significance of this lies in that research on osteoporosis in mice can have great relevance for and applications to humans. The same is true in relation to other problems related to fractures, skeletal development and illnesses, including testing of drugs.

Prof. Bab explained that in the last decade the new computerized micro-tomographic technology which has been developed provides excellent skeletal imaging. Using this technology, one can see two and three-dimensional images which show details down to the six-thousandth of a

millimeter. The new atlas presents almost 200 such two and three-dimensional images, showing all external portions of the mouse skeleton and also the internal anatomy of the bones.

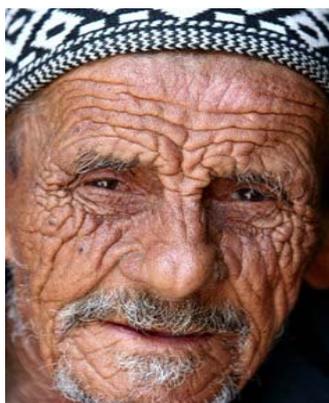
Also presented are three-dimensional images of the relationships between the bones at various joint positions. One chapter of the book, based on measurements of skeletons at various ages, describes the development of the skeleton and its aging and also the differences between males and females.

The micro-tomographic equipment used by the researchers was purchased by the Hebrew University. The purchase was partially supported by a grant from the Israel Science Foundation.

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## **THE FACULTY OF AGRICULTURE, FOOD AND ENVIRONMENTAL QUALITY SCIENCES**

### **Antioxidant to retard wrinkles**



Dr. Orit Bossi, Faculty of Agriculture, Food and Environmental Quality Sciences, succeeded in isolating a plant-based antioxidant that delays the aging process by countering the breakdown of collagen fibers in the skin.

Dr. Bossi conducted her research under the supervision of Zecharia Madar, the Karl Bach Professor of Agricultural Biochemistry at the Hebrew University, and Prof. Shlomo Grossman of Bar-Ilan University.

Antioxidants operate against free radicals which cause a breakdown of many tissues in the body, including the skin. When found in small quantities in the body, free radicals are not harmful and are even involved in various physical processes. When there is an excess of free radicals, however, as occurs during normal aging or as a result of excessive exposure to ultra-violet radiation from the sun, the result, among other things, is a breakdown of the collagen and elastin fibers in the skin. When this happens, there is a loss of skin elasticity and the formation of wrinkles.

“A problem with many of the commercial antioxidants found today in the market that are said to retard the aging process is that they oxidize quickly and therefore their efficiency declines with time,” said Dr. Bossi. “Vitamin C, for example, oxidizes rapidly and is sensitive to high temperatures. This is also true of the antioxidant EGCG which is found in green tea, and vitamin E. As opposed to these, the antioxidant which I used in my research is able to withstand high temperatures, is soluble in water, and does not oxidize easily and thus remains effective over time.”

Dr. Bossi is looking towards a new generation of cosmetic products which will not only combat wrinkles but will be more effective against deeper levels of skin wrinkles than current products. Dr. Bossi did not reveal the plant source she used to derive the antioxidant, since the research is in the process of being patented.

In her research, Dr. Bossi conducted experiments on mice skin tissue, which, she says, resembles that of humans. She applied her antioxidant on two skin cell groups – those which had been exposed to the sun’s rays and received her antioxidant and those which also had been exposed to sun but did not receive the antioxidant. The untreated cells showed a rise in free radicals causing wrinkles, while those cells which had been treated showed no significant increase in the free radicals level.

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## **THE SCHOOL OF SOCIAL WORK AND SOCIAL WELFARE**

### **A valentine’s day story: women more perceptive than men in describing relationships**



According to a study undertaken by graduate student Dana Atzil Slonim and Dr. Orya Tishby of the Paul Baerwald School of Social Work and Social Welfare, in cooperation with Prof. Jacques Barber and Dr. Carol Foltz from the University of Pennsylvania, women are better than men in describing their feelings and those of their romantic partners than are men, while the latter tend to project their own feelings upon their partners more than women.

The research was conducted in the United States among 97 couples, married and unmarried, between the ages of 18 and 46. Using a questionnaire, the researchers checked the sensitivities of couples in their relationships in three areas: participants' wishes or desires towards their romantic partner; the perceived response of how their partner will respond to these wishes; and finally for their own responses to their partners' responses.

The couples were asked to answer the survey in two ways: First, how they evaluate their relationship with their partners on the basis of the questionnaire; second, to rate how their partners would respond to the same issues raised in the questionnaire.

Generally speaking, the results of the survey showed a high consensus prevailed among couples regarding a desire to avoid conflict, and in perceptions of feelings of love, sensitivity and caring for each other. This was found to be especially true among the married couples who participated in the survey. The results showed that those couples were more similar in their attitudes towards one another than even they thought.

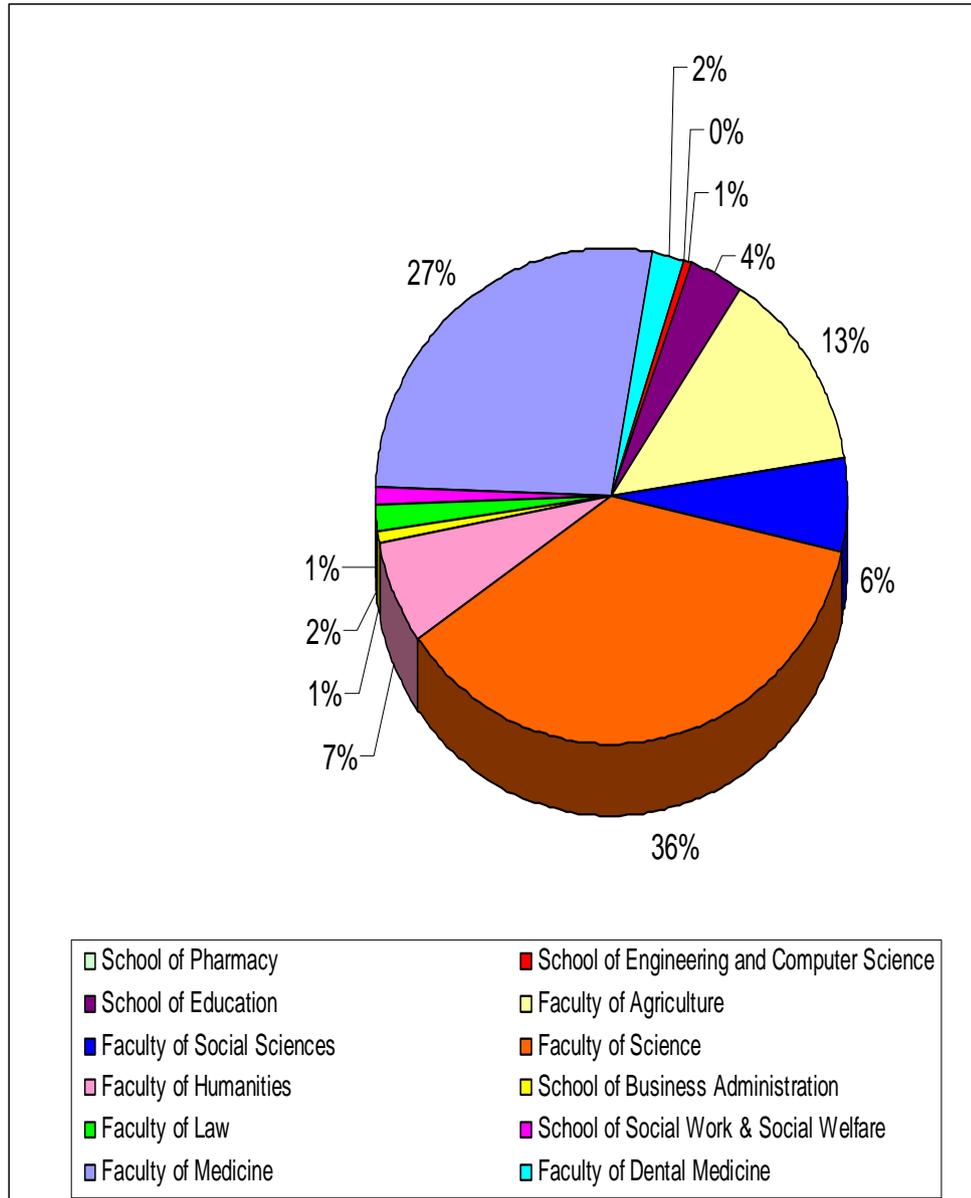
Despite this, there was a low level of agreement regarding perceptions on some specific issues. For example, the survey showed that men rated women more much more apprehensive about being abandoned than the women rated themselves. On the other hand, the women rated the men as much less apprehensive of being abandoned than the men rated themselves. Also, the women rated the men as more independent than the men felt about themselves, while the men rated the women as more fearful and less interested in sex.

Overall, the results of the survey showed that the women were much more accurate in describing the perceptions of their partners than were the men.

In some issues of relationships, the researchers felt that old male-female stereotypes tended to influence the responses. "Both sexes tend to lean on stereotypes in those areas that are more emotional, such as independence, the fear of being abandoned, fears in general and sexuality. In these areas, it would seem, the partners are not aware of the true thoughts and desires of the other," the researchers say, who conclude on this basis that "this shows the great importance of open communication -- especially in emotionally-laden topics -- as a tool for reducing conflicts and improving the quality of couples' lives."

### DISTRIBUTION OF RESEARCH AMONG FACULTIES 2006/2007

The following pie will give you an idea of the distribution of research funds among our various Faculties and Schools – 2006/2007:



## **Regional Desks at the Authority for Research and Development**

Following is a brief overview of research funds at the Authority for Research and Development, divided by the regional desks administering them. I have included a description of several significant projects that you may find particularly interesting.



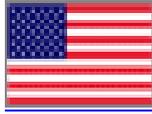
### **The Israel Desk**

The Israel desk, headed by Ms. Sara Shaik, is the largest desk in the Authority for Research and Development. Israeli funding agencies, government bodies and public foundations have provided the amount of approximately \$44 million. This sum has been very difficult to maintain, due to the big budget cuts in the government's ministries and agencies and the growing competition with other Israeli universities.

The Israel Science Foundation with the amount of \$17 million in 2006/2007 has supported approximately 450 projects (3-4 year programs). These included the Morasha program, in cooperation with the Legacy Heritage Fund, to support the absorption of new faculty members, and two projects in converging technologies. These projects integrate laboratories and each project is approximately \$200,000 per year, for the period of 3-4 years.

With regard to budgets that come from government, unfortunately, projects from ministries such as the Ministry of Education and the Ministry of Science have decreased or dropped due to the financial cuts. Other governmental ministries such as the Ministry of Agriculture and the Ministry of Defense have maintained their level of support.

This year, new faculties have submitted a great deal of proposals; the rate of success will be determined next year. However, we are sure that our excellent researchers will be able to compete with the high competition for research grants.



### **The American Desk**

The American Desk, headed by Ms. Elinor Slater, managed nearly \$17.5 million in research funds during 2006/2007; \$7.5 million of which was for new projects.

Among the new projects is a USAID Middle East Regional Cooperation grant with Jordan which deals with air quality and air pollution between Eilat in Israel and Aqaba in Jordan. Prof. Menachem Luria and his colleagues from Aqaba beamed a powerful light across the Gulf to study air particles. They hope that the beam of light will bring both significant scientific results as well as better relations between the two countries.

Other new international cooperations funded by the US government include a project on tomato curly stunt virus in which Prof. Czosnek from the Faculty of Agriculture, Food and Environmental Quality Sciences is working with scientists in South Africa and Mozambique to solve this problem. Prof. Saranga from the Faculty of Agriculture, Food and Environmental Quality Sciences has begun working with colleagues in Ethiopia on drought resistance in sorghum, an important crop there.

Hebrew University scientists continue to receive a significant number of projects funded by the National Institutes of Health; many of them are in collaboration with colleagues in the United States. We currently have nearly 50 NIH projects. Of course, many of them are in the Faculty of Medicine, but researchers in Dental Medicine, Pharmacy, Social Work, Public Health, Law, Social Sciences (Psychology, Statistics) and Science (Computers and Life Sciences) also are NIH grantees. Prof. Hanna Engelberg-Kulka received a direct grant for a study of programmed cell death, a fundamental biological phenomenon of bacterial communication.

The Israel Cancer Research Fund has continually supported research at the University, but the past year was a particularly successful one: with the award of two "Professorships" to Profs. Cedar and Bergman, 2 new Career Development Awards, 4 new project grants and 2 fellowships. We also had five new grants from the Juvenile Diabetes Research Foundation, including a network grant involving collaborators at the Technion Institute and in Texas.

The US Desk submitted 213 applications which we trust will produce many exciting new projects in 2008.



### **The European Desk**

The European Desk has two sections, one focusing on the European Union, headed by Ms. Ruth Fisch, and the other specializing in German-speaking countries, such as the Federal Republic of Germany, the Federal Republic of Austria and Switzerland, headed by Ms. Alma Lessing, with the help of Ms. Charlotte Goldfarb.

Out of \$34 million for ongoing projects in the European Union Desk, \$11.5 million represent the volume of 159 projects managed by the desk in 2006-2007, of which \$6 million represent primarily the last acquired contracts for the university from the European Union Sixth Research Framework Program, the program that in its four years generated a total of more than \$31 million for the researchers of the Hebrew University.

Spring 2007 marked the first round of applications by Hebrew University researchers to the Seventh EC Research Framework Program. 165 proposals were submitted to various programs including 22 proposals of Hebrew University young researchers to the first round of the recently introduced prestigious ERC (European Research Council) program, of which 7 passed to the second stage and 6 (of which 4 from the Faculty of Science, 1 from the Faculty of Medicine and 1 from the Faculty of Law) will receive a 5 year individual grant. These 6 ERC Starting Grants grants total a remarkable amount of over \$11.7 million, allowing the young investigators to concentrate in their research project and become leading researchers in their field.

Another 23 EC projects generating an additional \$9.2 million funding for research were obtained this year. Out of these 23 projects, 8 International Marie Curie Re-integration grants of \$150,000 each were received by 8 researchers returning to Israel from a stay of at least 3 years in the USA and now integrated in the Hebrew University. This is an important add-up to the support provided by the University to these newly integrated researchers.

The remaining projects were in the fields of Health, Nanotechnology and Materials, Information and Communication Technologies, Environment, Social Sciences and Infrastructures. 4 projects were awarded this year to scientists from Social Sciences, Law and Education. The largest grants, excluding the ERC grants mentioned above, were received by Prof. Michal Linal for her participation in PROSPECT, a Health project entitled "PROteomics SPECification in Time and Space" (\$1.7 million for 5 years) and by Profs. J. Shappir, M. Spira, and S. Yitzhaik for their participation in BRAINSTORM, an ICT collaborative project entitled "On-chip simultaneous intracellular recording and stimulation of electrical and biochemical activities from hundreds of neurons" (\$1.7 million for 3 years). This is the third time in a row that Profs. Spira, Shappir and Yitzhaik obtain a 3 year EC grant coordinated by IMEC of Belgium.

We are now looking forward to the results of the University's autumn 2007 submissions to FP7, as well as to the spring submission round in 2008, in particular, the first round of ERC Individual Advanced Researchers proposals, which we hope will be as successful as Hebrew University's submission to the ERC Young Investigators program.



**The German- Speaking Countries Desk**



In 2006/2007, the Desk for German-speaking countries submitted 95 research proposals to the different funding agencies in the framework of German-Israeli scientific cooperation. During this period, 32 research projects were newly approved for future funding. Altogether, there are currently a total of 200 open budgets for active research projects, new and ongoing, with a total annual budget of \$7.4 million. The main sources of funding are the Minerva Foundation which supports 11 active centers at the Hebrew University, the German-Israeli Project Coordination (DIP), the Deutsche Forschungsgemeinschaft (DFG) and the German-Israeli Foundation of Research and Development (GIF).

Funding programs from the German-speaking countries also emphasize the promotion of the work of young scientists: GIF has a special funding program for young researchers geared at establishing research contacts in Germany. The fund of the government of Niedersachsen in Germany and the Abisch-Frenkel Fund from Switzerland also support young scientists.

The Hebrew University's Einstein-Center founded by the German Ministry of Science (BMBF) in December 2005, in honor of the Einstein year in Germany, took up its activity in 2006. The Einstein Center under the directorship of Prof. Hanoch Gutfreund, consists of three components, each of them pursuing its own academic agenda – Physics (focusing on implications of Einstein's work at the frontiers of contemporary physics), Humanities (focusing on cultural impacts of science) and Social Sciences (focusing on ethics in international order). The Center organized a number of international symposia and conferences, bilateral workshops, as well as sponsored lectures and events of a cross-disciplinary nature for academic and general audiences. In 2007, the Center also organized the exhibition "Newton's Secrets" at the Jewish National and University Library.

The trilateral projects for German, Israeli and Palestinian researchers, funded by the DFG since 1995, also deal with research across borders; however, in this case, they are of a rather physical than academic nature. The projects deal traditionally with applied science and high-impact approaches on pressing issues at hand and receive funding for a period of 3-5 years.

In 2006/2007, the following tri-lateral projects received funding from the DFG:

Targeting the Myristoyl Binding Pocket in BCR/ABL: A Rational Approach for the Design of Molecular Therapy against Philadelphia Chromosome-Positive Leukemia, by Prof. Martin Ruthardt from the Goethe University in Frankfurt, Prof. Amiram Goldblum from the Faculty of Medicine at the Hebrew University and Prof. Yousef Najajreh at Al Quds University in Jerusalem. The project proposes to inhibit the constitutive activation of BCR/ABL by "myristoyl mimics" which compete for the Myristoyl binding pocket. These mimics will be designed for selectivity versus Src family kinases which could have a mechanism of auto-inhibition. Such competitors will be designed by innovative computer methods, synthesized and screened for their efficacy in several leukaemia models.

Drought Tolerant Sun-Dried Tomatoes: A Novel Product Based on Heterotic Natural Biodiversity, by Dr. Alisdair Fernie from the Max Planck Institute in

Gol, Prof. Dani Zamir from the Hebrew University's Faculty of Agriculture, Food and Environmental Quality Sciences and Dr. Bilal Ghareeb from the Arab-American University in Jenin. The project integrates diverse approaches to develop unique nutrient rich tasty sun-dried tomato products suitable for cultivation in water scarce areas.

Dr. Matthias Schmidt headed the Desk of German-Speaking Countries from 2004-2007. Since July 2007 the Desk of German-Speaking Countries is headed by Alma Lessing.



### **The Internal Research Grants Desk**

The Internal Research Grants Desk, headed by Ms. Shula Wultz, was established as part of the University's policy to further the Basic and Applied Research of our faculty and to encourage our researchers to attain research grants from sources outside the University.

The ARD internal grants are provided to advance research to the stage where it qualifies for funding from external sources; \$27 million was allocated during 2006/2007, including internal funds, donations from The Friends of the Hebrew University. Of these funds, \$1,225 million bolstered fields of research earmarked by donors, such as the Lejwa Trust for Biochemical Research, the Ring Family Foundation for Atmospheric and Global Change Studies, the Robert Szold Institute, the Julius Oppenheimer Fund, the Milton Rosenbaum Foundation for Psychiatric Research, the Alberto Moskona Fund, the Landofsky Fund, the Sydney Edelshtein Fund and the David & Betty Pepper donation for Treatment of Neurodegenerative diseases.

This year two contracts were signed with the Wolfson Family Charitable Trust from England: The Laboratory Refurbishment Programme at the amount of \$1,100,000 and the Research Laboratories for Young Researchers at the amount of \$1,236,000.

Special support amounted to \$835,000 from the Lily Safra Foundation Fund and \$250,000 from the President's fund was given to three new young researchers at our University.

A continuation contract for a period of three years in which \$3,250,000 was signed with the University and Yissum was given by an anonymous donor for the applied science researchers.

The generous fund from the Johnson & Johnson Company and the matched grant from the Internal Applied Science Fund were allocated for the support of research with conceptual innovation, "from transformation to assimilation", who conveyed a breakthrough in the scientific field. These internal projects would constitute a parallel program to the "Bikora" program of the National Scientific Foundation.

In addition, various foundations for academic development allocated support for several centers, including the Harvey M. Krueger Family Center for Nanoscience and Nanotechnology, the Interdisciplinary Center for Representations of Groups in Mathematics, the Nehemia Levtzion Center for Islamic Studies, the Eric Roland Research Fund in the field of Neurodegenerative Diseases, the National Smith Psychobiology Center, the Center for Economics and Law Center, the Marketing Research and Financial Institutes, the Philanthropy Center, the Gilo Center for the Study of Democracy, the Orion Center for the Study of the Dead Sea Scrolls, the Eco-System Center and the Center for the Study of Rationality. Lily Safra supported the Interdisciplinary Center for Neural Computation. Total support for these special centers amounted to \$643,000.

The internal desk has distributed, this year, grants of a total \$859,000 for applied research, providing support at three different levels: for researchers who presented novel ideas at their enable them to receive support from external sources; for applied research at a more advanced stage that may, within a year, be of commercial interest for industry; and for applied multi-disciplinary projects with conceptual innovations.



Yissum, the Technology Transfer Company of the Hebrew University of Jerusalem, promotes the transfer of Hebrew University technology for the benefit of society, while maximizing returns to support research, education and scientific excellence.

Yissum provides the interface between the University's researchers and industry, including licensing out of new technologies; creation and support of spin-off companies; industry-sponsored academic research; scientific services and consultation.

Founded in 1964, Yissum is one of the first technology transfer companies in the world. These years of experience have borne fruit, as Yissum's revenues now place it among the top 15 technology transfer companies worldwide. As a result of Yissum's activities, over \$1 billion worth of products based on Hebrew University technology are sold worldwide annually. Through its efforts in securing industry-sponsored research, Yissum contributes some 10% of the Hebrew University's net research budget.

Charged with the protection and commercialization of the University's intellectual property, Yissum has registered more than 5,500 patents covering 1,600 inventions. 480 of these inventions have been licensed and 65 companies spun-off. In 2007, Yissum received 121 new invention disclosures and filed 93 new patent applications. In September 2007, Yissum launched a Fast Track initiative for patent application, in order to encourage university researchers to promote the protection of their intellectual property and its commercialization potential and to increase the number of promoted projects. On the commercialization side, approximately 420 projects were available for licensing at the end of 2007. 426 agreements were signed in 2007, including 47 license agreements and 97 sponsored research and scientific service agreements.

Among the license agreements that were signed this year are the licensing-out of a novel development for the treatment of allergic asthma from the laboratory of Prof. Francesca Levi-Schaffer to Teva Pharmaceuticals, in return for research milestone payments and royalties from future sales. A Belgian holding company licensed a "green" technology from the laboratory of Prof. Sergei Brown, offering a unique and cost effective solution for the manufacturing of biodegradable plastic for the food packaging industry from agricultural products such as soy, canola and corn.

Two important license agreements were signed with regards to inventions of Professors Meir Bialer and Boris Yagen. In July, an agreement was signed with Neurocrine for the development and commercialization of Stereo-Isomers of valnoctamide for the treatment of neurological and psychiatric diseases. This is an opportunity to penetrate a \$15bn drug market and reach over 50 million patients around the world. Another license agreement was

signed with the American company Jazz, also for research milestones and royalties on future sales.

Throughout 2007 efforts continued to enhance awareness in Israel and worldwide of Yissum's activities, in order to enlarge the commercialization opportunities in various markets. Representatives of some of the world's leading companies visited Yissum and took interest in various projects presented to them. These include Siemens, Kodak, Philips, Merck Pharmaceuticals, Merck Germany, Elron, Fujitsu, Coca Cola, De Ruiters Seeds, Tnuva, JVP Venture Capital, and Kinnarot Incubator, to name but a few. Additional key visits included businessman Moris Kahn, Canada's Ambassador to Israel, a delegation of businessmen from Japan's biggest corporations and a visit from Mondragon Corporation from Spain. In addition, PR activities were undertaken to increase awareness of Yissum's activities and technologies available for licensing.

Thousands visited Yissum's booth during the three days of the BioMed 2007 Exhibition which took place in May in Tel Aviv. Approximately a 100 leaders from the industry and academia were invited to a Yissum sponsored luncheon and lecture by Dr. Peter Stern, Senior Editor of Science Magazine. Another conference in which Yissum participated was Watec 2007 which took place at the end of October. As a sponsor, Yissum presented projects and scientific developments in the water and alternative energy fields. As a part of our efforts to connect between Hebrew University researchers and the industry, Yissum initiated a special event with seniors from the pharmaceutical companies Johnson & Johnson and Merck, which took place at Beit Belgia. This gathering will be established as an annual tradition.

In 2007 further developments were incorporated into the TTM system, the computerized Technology Transfer Management system, tailor-made for Yissum. This included a new module which allows Hebrew University researchers the possibility to connect directly to the system through Yissum's website in order to receive updated marketing information regarding their projects. A significant emphasis was put this year on intensive reclamation of past data, which still has considerable effect on current activities. In addition, for the first time, Yissum was approached by companies interested in purchasing their new computerized system and in learning the many processes undertaken to allow a fast and efficient access to the marketing, patents and financial information.

At the beginning of March 2007 the new Yissum website was launched, in which much attention was given to the informative and clear presentation of projects which are available for licensing.

These days, Yissum is launching a few new initiatives to promote technology commercialization, including a Cleantech Fund to support the fields of water, alternative energy and environment, and Baby See, preliminary support for projects with commercial potential in sums of up to \$50k

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## **PRIZES AND HONORS**

### **The Kaye Innovation Awards**

The Hebrew University is very fortunate in having Isaac Kaye as a patron of applied research. Isaac Kaye established the annual Kaye Innovation Awards at the Hebrew University in 1993. The Awards have developed a prestigious reputation since their inception. Prizes are awarded annually for work in any topic that shows potential for bringing profit or savings to the University principally through royalties. The winners demonstrate not only good science, but also a focus on commercial viability and the benefits this brings to the University. This year we are celebrating the fourteenth anniversary of the Kaye Innovation Awards and the Hebrew University is most grateful to Isaac Kaye for his important initiative.

In the Faculty Researchers category, Prof. Daniel Cohen from the Institute of Chemistry won the first prize for his research on *Novel tailor-made biodegradable polymers for the prevention of post-surgical adhesions*. The second prize was given to Prof. Hermona Soreq from the Institute of Life Sciences for her research on *Engineered human cholinesterases and RNA-targeted agents to suppress their functioning*. The third prize was awarded to Prof. Shimon Gatt and Dr. Arie Dagan from the Faculty of Medicine for their coordinated research on: *Development of synthetic sphingolipid analogs as anti-cancer drugs*.

In the Students Category, Mr. Yaniv Semel, student under the supervision of Prof. Danny Zamir from the Faculty of Agricultural, Food and Environmental Quality Sciences, won the first Prize on his research *Phenome Networks*:

*Web-based database system for the analysis of quantitative phenotypes on both plants and animals for breeding and research.* The second prize was awarded to Mr. Nadav Kimelman, student under the supervision of Prof. Dan Gazit from the Faculty of Dental Medicine, on his research *Scaffold with oxygen carriers and their use in tissue engineering*. The third prize was given to two students: Mr. Dima Sheyn, student under the supervision of Prof. Dan Gazit from the Faculty of Dental Medicine, for his research entitled: *Ultrasound-based nonviral gene delivery induces bone formation in vivo*, and Mr. Matan Rapoport, student under the supervision of Prof. Haya Lorberboum-Galski from the Faculty of Medicine, for his research on *Enzyme replacement therapy for mitochondrial disorders: Lipoamide dehydrogenase deficiency as a proof-of-principle*.

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### **The Barenholz Awards for Applied Science**

Prof. Yehezkel Barenholz, twice a winner of the Kaye Innovation Awards, has successfully marketed his invention, DOXIL, an FDA-approved anti-cancer drug, for which he won the award in 1997. With the profits, Prof. Barenholz has established an endowment fund from whose proceeds he is giving yearly prizes to doctoral students for their research in various scientific fields. This year's selected fields were (1) Drug Delivery Systems; (2) Computational Biology; (3) Medical Devices.

The first category of prizes is open to students in all the academic institutions of Israel. Mr. Avi Schroeder from the Ben-Gurion's University's Department of Chemical Engineering won the award for his work on Controlled release of drugs from liposomes with low-frequency ultrasound and cartilage lubrication. Ms. Naama Elefant from the Faculty of Medicine's Department of Molecular Genetics and Biotechnology won the second category award for her work on Prediction of miRNA targets reveals a new mechanism of viral Immuno-evasion. The last category was awarded to both Mr. Hagai Lalazar & Mr. Lavi Shpigelman from the Faculty of Medicine's **Interdisciplinary Center for Neural Computation & Department of Physiology** for their work on Brain-machine interfaces using an adaptive dynamic kernel-based algorithm.

Prof. Barenholz initiative is greatly appreciated and we continue to hope that other researchers will follow the example of Prof. Barenholz and establish honorary prizes for students and researchers.

### **The Polonsky Awards for Creativity and Originality in the Humanistic Disciplines**

Dr. Leonard Polonsky has most generously initiated a program to award prizes in the field of Humanities. The prizes are awarded for a research product - a book, paper, composition, or discovery in any field of the Humanities - that has been written and/or published within the last five years. The awards are intended for applicants belonging to any department of any faculty and are given to: (1) Hebrew University academic staff, with the first prize going to a senior staff researcher, and the second prize to a young researcher; (2) for outstanding doctoral dissertations; (3) for an outstanding M.A. thesis.

The response to the Call for Proposals, which was published in several faculties, was as enthusiastic as it has been since the inception of the award four years ago.

First Prize was given to Dr. Michael Segal, Department of Bible, for his book *The Book of Jubilees: Rewritten Bible, Redaction, Ideology and Theology*. Second Prize was given to Prof. Ronnie Ellenblum, Department of Geography, for his book *Crusader Castles and Modern Histories*, and Dr. Michael Roubach, Department of Philosophy, for his book *Being and Number in Heidegger's Thought*. First Prize for MA students was given to both Mr. Maoz Kahana, Department of Jewish History, for his thesis "Stability and change in the Hatam Sofer's Responsa", and Mr. Oded Porat, Department of Contemporary Jewry, for his thesis "Studying the Treatise "Berit Hamnuha" ("Covenant of Serenity"): Its Ideas, Literature, Relationships and Introduction to the Critical Edition".

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### **The Abisch-Frenkel Award**

The Abisch-Frenkel Foundation was established in 1994 in Basel, Switzerland, by Dr. Eva Abisch-Frenkel and the late Dr. Leo Abisch. The purpose of the Foundation is to support projects of younger scientists who work in areas of future benefit to human health and well-being at the Hebrew University and at the Weizmann Institute. The awards signify the continuing support of research in the life sciences, to which the founders' entire professional lives in the Swiss pharmaceutical industry were devoted.

Without doubt, the Foundation's support has encouraged and motivated our students to strive to excel in this field.



Prof. Yehudit Bergman

Therefore, it is not surprising that the Foundation chose **Prof. Yehudit Bergman** for the Abisch-Frenkel Prize for Excellency in the Life Sciences. Prof. Bergman, who deeply expresses the Foundation's view, is indeed an outstanding biologist and a highly regarded leader in the field of immunology where she brought about a

scientific revolution in our fundamental understanding of the humeral immune response.

Over the past decade Prof. Bergman made several ground breaking discoveries illuminating the unique molecular process of antibody selection and allelic exclusion.

Focusing on epigenetic factors regulating the expression of immunoglobulin genes, she demonstrated, against the common dogma, that the choice of a single allele coding for the antibody polypeptide chain is not a stochastic event, but imprinted in embryonic cells at an early stage during fetal development. The imprinted program involves molecular events such as DNA methylation and de-methylation, histone modification and nuclear relocation, eventually leading to rearrangement of genomic elements in one allele while silencing the expression of the other allele. Once picked and deemed productive, this allele then serves as the preferential substrate for all subsequent sequence modifications that contribute to immune diversity. There is no question that this pre-programmed selection scheme represents a new concept in our understanding of allelic choice as a fundamental mechanism required for generating immune receptor diversity on a single-cell basis. Furthermore, since the basic molecular rules derived from Yehudit's work also play a key role in other gene selection systems, it is clear that her work is of fundamental importance for biology, in general.

Once again, I would like to thank Dr. Eva Abisch and the Abisch-Frenkel Foundation for all their assistance in guaranteeing that our young scientists maintain their scientific edge and intellectual excellence in years to come.

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Among some of the Honors that our academic staff has received in the Past Year:

### **The Klachky Family Award**

This year's Klachky Family Award for the Advancement of the Frontiers of Science was awarded to **Prof. Uri Banin**, a member of the Institute of Chemistry and the Harvey M. Krueger Family Center for Nanoscience and Nanotechnology, at the University's Faculty of Science.



Prof. Uri Banin

Prof. Banin is a pioneer in nanoscience and nanotechnology of semiconductor nanocrystals with numerous publications in the field. He has received a number of awards and fellowships in recognition of his outstanding scientific contribution, including the Intel prize for a Ph.D. student (1992), the prize of the Israel Chemical Society for a graduate student (1993), the Rothschild postdoctoral fellowship (1994-1995), the Fulbright postdoctoral fellowship (1994-1996), the Alon fellowship for young faculty from the Israeli board of higher education (1997-2000), the Yoram Ben-Porat prize from the Hebrew University (2000), and most recently, the Israel Chemical Society prize for a young scientist (2002). Dr. Banin received a B.S. with honors in Physics and Chemistry (1989) and Ph.D. in Physical Chemistry (1994) from the Hebrew University of Jerusalem.

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### **The 2008 Wolf Prize in Medicine**

**Prof. Howard Cedar** and **Prof. Aharon Razin** have been awarded the 2008 Wolf Prize in Medicine for their fundamental contributions to the control of gene expression and cancer research.

Minister of Education Prof. Yuli Tamir, chairperson of the Wolf Foundation Council, announced that the \$100,000 prize, often referred to as Israel's "Nobel Prize," will be awarded to Professors Cedar and Razin of the Hebrew University-Hadassah Medical School "for their fundamental contributions to our understanding of the role of DNA methylation in the biological function

of higher organisms, with widespread impact on studies of development, control of gene expression and cancer research."

DNA methylation (chemical changes in the DNA molecule) is a very basic aspect of animal cell biology involved in the regulation of a large number of physiological, developmental and pathological processes. The foundations of this field were laid, almost exclusively, through the work of Cedar and Razin.

Prof. Cedar and Razin have both received the Israel Prize and are members of the European Molecular Biology Organization (EMBO) and the Human Genome Organization (HUGO).

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### **Six Young Scientists win First ERC Competitive European Union Grants**

Six young Hebrew University of Jerusalem scientists have been awarded five-year research grants under the European Union's first competition for outstanding starting independent investigators.

The winners were chosen on the basis of having presented excellent, ground-breaking research ideas, plus having displayed proven potential to establish independent research careers and to become world leaders in their fields.

The research grants are being given through the European Research Council (ERC), a new research funding body created under the EU's 7th Framework Program for Research, and are designed to enable the young researchers to carry out specific research projects.

In the competition, about 300 up-and-coming research leaders -- all of whom received their doctorates between two and nine years ago -- were chosen from more than 9,000 applicants. About 250 of them will receive funding. The successful candidates represent over 30 nationalities and are based in some 170 host institutions in 21 different countries. Israel ranked seventh in the number of total grant winners by countries with 24 researchers receiving this important grant, six of them from the Hebrew University.

The starting grants are designed to boost the careers of researchers, who may be working in any area of science or scholarship, at the time they are establishing themselves as independent research leaders. The average age of the successful grant winners is 35 and 26% are women.

The six Hebrew University winners and their research projects are:

**Dr. Sigal Ben-Yehuda** of the Faculty of Medicine -- investigation of the nature of dormant bacterial spores.

**Dr. Assaf Friedler** of the Institute of Chemistry -- new methodology for the design of drugs that act by modulating proteins: applications for cancer and AIDS.

**Dr. Tsachik Gelande**r of the Einstein Institute of Mathematics -- group theory and geometry.

**Dr. Adi Mizrahi** of the Silberman Institute of Life Sciences -- using optical imaging to probe long-term neurophysiological changes in vivo.

**Prof. Re'em Sari** of the Racah Institute of Physics -- planets in the solar system and beyond: how they form and how they evolve.

**Prof. Yuval Shany** of the Faculty of Law -- promise and limits of international courts and tribunals: exploring the conditions for effective international adjudication.



Clockwise from upper right:

Sigal Ben-Yehuda  
Tsachik Gelande  
Re'em Sari  
Assaf Friedler  
Adi Mizrahi



Prof. Yuval Shany

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## **2008 Israel Prize for Research in Political Science**

**Prof. Zeev Sternhell** of the Hebrew University's department of politics is this year's laureate of the Israel Prize in Political Science.

The judges, who included Profs. Shlomo Avineri, Ella Balfer and Avraham Brichta, described Sternhell as "one of the leading scholars in the field of political thought in Israel and the world". His research, which has been translated into many languages, has led to a significant change in the scientific community in the concept of ideological movements in general and radical movements in particular.

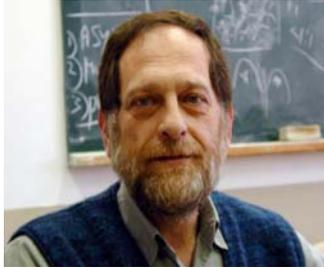
Prof. Sternhell was born in 1935 in Galicia. After World War II broke out, he was smuggled to Lvov by an uncle who was allowed to work outside the Przemysl ghetto. After the war he left Poland for France, where he lived with an aunt. As a boy who experienced Nazism and Stalinism and also got to know religious fanaticism in its Catholic-Polish version, he suddenly discovered freedom, human rights, freedom of speech and secularism.

In 1951, he immigrated to Israel, and was sent to the Magdiel agricultural institution. He served as a commander in the Golani Unit. In October 1957, he began studying political science and history, while simultaneously working as a librarian.

"The Hebrew University, then the only university in Israel, was the center of intense intellectual activity, and being part of that was a real experience," he relates. "I was lucky to have had great teachers, but saw that the role of an intellectual was not only to understand the world, but to change it." In this respect, everyone was a student of Marx, but also liberals who believed in the importance of the scientific and public discourse".

Completing his B.A. in 1960, he started studying in the department of political science that was still in its early stages. Completing his M.A. in 1964, he went on to study his doctorate at the Institute of Political Science in Paris. In the 1970's, Prof. Sternhell began contributing to the Haaretz newspaper, which he continues until today. He says, "In actively participating in public life, I give expression to the personal responsibility that we have to the future of society and the future of Zionism. I always thought that the greatest service to society that a man can do whose profession is research, writing and studying, is to say what he thinks with no reservation or fear".

IN SUMMARY:



As Vice President for Research and Development, I can report immense satisfaction from the performance of the Hebrew University researchers. Their capability to increase research activities in a stringent financial situation is greatly admired. The ongoing search for alternative sources of funding becomes more challenging, especially when the Finance Ministry is desperately in need of cutting expenses wherever it can. We are fortunate to

be able to rely on support from the Friends of the Hebrew University worldwide.

I would like to thank Dr. Eran Vardi, Director of Research and Authority, and the professional and administrative staff of the Authority for Research and Development for their ongoing support, dedication, faith and personal commitment to what we at the University are doing.

We hope that the coming year will bring peace and, with it, new breakthroughs and developments in research for the benefit of mankind.

Prof. Hervé (Hillel) Bercovier  
Vice President for Research and Development

REPORT BY THE DEAN OF STUDENTS



## **REPORT ON STUDENT AFFAIRS**

The Dean of Students Office initiates and coordinates the activities intended to further the welfare of the students as members of the University community (visit our site at <https://studean.huji.ac.il>). The office is ready to provide assistance in solving personal, social and economic problems in the student's life. It provides the link needed to facilitate the interaction between students and different academic and administrative units of the University and external agents. The Dean of Students is the Ombudsman handling all student complaints, and is the commissioner for sexual harassment.

The Office handles the ties between the University and the Students Union and oversees the activities of academic and administrative faculty as well as of the student cells that deal with social and political activity.

The Dean of Students Office is headed by the Dean, Prof. Esther Shohami, and the Associate Dean, Ms. Noga Zimring. The Office incorporates the following units: The Unit for Social Involvement, Student Dormitories and Counseling Services. Ms. Diana Daniel Shrem is the Director of the Unit for Social Involvement, Mr. Yitsack (Hofy) Hafouta is the Director of the Students Dormitories and Dr. Orya Tishby is the Director of the Counseling Services for Students.

### **Political and Social Activities on Campus**

The Dean of Students Office is in charge of the political and social activities of the entire Hebrew University Community including students and staff. Ms. Yuli Razaev, coordinates these activities. Following the implementation of changes recommended by the Student Affairs Committee of the Board of Governors, the Chairmanship of the Students Union became a two-year office. Mr. Shlomo Levi, an MA student in Public Policy was elected last summer as the Chairperson of the Students Union. In this context, an agreement was reached between the Hebrew University and the Students Union to abolish the Students Union membership fees (although joining the Union is voluntary). A package of different benefits was offered to students for a small fee including internet services, a small number of parking places, legal, communication (SMS, internet) and other services. Acquiring the package is voluntary.

The political activity of the students on the University's various campuses is comprised of 20 political parties compared to 40 in previous years. The University encourages and facilitates political activities. The Office of the Dean of Students supervises and ensures that all such activities are in accordance with the statutes of public activity.

### **The strike**

The Hebrew University community went through three months of a very difficult strike by the senior academic staff all over the country, from October 21, 2007 through January 18, 2008. The University has done its best to minimize the negative effects of the strike: the academic year has been reorganized in order to ensure that students will be able to complete their degrees according to schedule, and the University is showing flexibility towards students as much as possible without compromising academic quality. The strike has taken a heavy toll on students. The University is fully aware of this and has responded by allocating special funds to compensate for some of the financial losses of the students. Thus, a committee, headed by the Dean of students, was formed to set criteria for distribution of these funds, and those students found eligible will receive this special financial assistance.

### **The Unit for Social Involvement**

The Unit for Social Involvement operates in several areas. During the past few years the activities concentrated on the following:

*Social Involvement in the Community* – in the framework of the activities offered by the Unit, there are thousands of students (most in the “Perach” program) who are working to assist needy populations in the community.

There are five special programs to develop student leadership. In each of these leadership programs the students are involved in both theoretical and field activities which are unique to the members of the program. The programs are geared to create involved responsible leadership that is committed to act on behalf of distressed populations among Israeli society.

In recognition of the high quality of the leadership programs that are offered by the Unit of Social Involvement, The Landa Fund decided to support one of these programs in which 60 students participate, over the coming years.

Other programs are ISEF, Without Borders (a joint Jewish and Arab students program) and Women leadership programs. Altogether about 170 students participate in these programs.

***Encouraging Higher Education*** - Special programs have been developed to encourage high school students to obtain an education in general and higher education in particular. The programs are held on the University's Campus which gives these students a feeling of pride and capability. Today there are four such programs: The Lehava program (which has been extended with the generous help of The Landa Fund in which high school students participate in regular university courses, Zahala - a program designed to strengthen studies in English and Mathematics, and two programs specially designed for the needs of the Arab high school population. In total, there are about 60 Hebrew University students and about 160 high-school students participating in these programs.

A new initiative — the Council for Social Involvement, an umbrella body for the University's many and varied social outreach programs and activities — was launched by the Dean of Students Office. The Council, which comprises students, faculty members and University management, covers the full spectrum of social outreach at the University, from compulsory academic courses such as fieldwork experience for social work students through to social outreach requirements for scholarship recipients, purely voluntary activities such as the *Breira* (Choice) Legal Assistance Center run by law students and the activities of the University's Authority for Youth and Community and the Unit for Social involvement. The Council meets monthly, providing a vital forum for interchange and potential cooperation between its members.

This year, based on our last year's activity report, a certain amount of money was allocated by the Government's Planning and Budgeting Committee to the Dean of Students Office to extend the community/volunteer activities of the students. To this end, in addition to supporting project proposals submitted by the faculties, we initiated a call for proposals addressed to promote students' initiatives in community projects. A committee has formulated a set of priorities and the criteria for the distribution of these funds, and 18 projects were selected.

### **Services to groups of students with special needs**

A large group of students in need of special services are *blind students*.

There are about 120 blind students at the University. In the Center for the Blind (Mr. Moshe Oved Director), established in cooperation with the “Aleh” Association which continues to provide a part of the budget for its ongoing activities, special equipment, including a recording studio and broad audio library, is available for blind students. In addition, the Center helps the blind students with personal, social and economic problems.

A help group was formed for students with hearing deficits which will provide social network, as well as special hearing aids and devices.

As of this year, special attention is given to students with emotional disturbances and they are provided with personal and professional assistance. The budget for these services comes partly from the National Insurance Institute.

In recent years we are witnessing a rise in the number of students with various *learning disabilities* who request the University’s assistance in services and special adaptations that will enable them to succeed in their studies. Not long ago, the Knesset passed a law which lists and protects the rights of students with learning disabilities in the higher education system. The new law is compatible with the approach and services provided by the Hebrew University. These services are provided under the umbrella of the Student Counseling Services and include several counselors, headed by Ms. Judith Denan, hired to provide assessment of learning disabilities, counseling and help in acquiring learning skills. Personal assistance by tutors is also offered for students in need. About 200 students (out of about 900) are receiving assistance in this framework. Support for Students with Learning Disabilities is provided on the Mount Scopus, Givat Ram and the Rehovot campuses.

With the support of the Goldman Fund, we continue to assist *Ethiopian students*. The assistance is counseling and guidance by a coordinator for the students and providing tutoring in subjects such as English, economics and writing papers. In addition to this assistance, the students have been offered group meetings of a social nature in which 16 students participated.

#### **Unit for services to Arab students**

An Arab graduate student in social work, Mr. Laith Gayousi, was selected to head the new unit established by the Dean to meet the special needs of the Arab students at the University. Mapping special needs of that particular

group which stem from their younger age, different cultural background, lack of language (Hebrew) skills, difficulties in learning skills, on top of social segregation, led us to launch this new program. Our first main goal is to meet the first year students upon arrival at the University, help them and when necessary, provide tutoring. We believe that such an approach will reduce the rate of drop-out and failure in the first year, help the students to graduate within the acceptable time-frame and reduce social tensions.

### **Student Dormitories**

The student dormitories are, in our opinion, a central service and perhaps the most important service provided by the University to its students. One must take into account that about 70% of all students at the Hebrew University come from outside of Jerusalem. In an effort to improve the services provided to students in the dormitories, and adapt them to the needs of the students, the management of the dormitories has carried out extensive review of the positions of the students, their expectations and their needs, a special economic review of the dormitory fees and an organizational review.

The new Student Village was opened on Mount Scopus last year and it houses 1,500 students. The apartments are fully furnished and each has five single bedrooms

### **Economic Assistance to Students**

Student aid scholarships are handled by the Aid Section in the Student Administration headed by Ms. Ora Shair. The Dean of Students serves as Chairman of the University's Aid Committee.

In 2006/2007 scholarships were granted to undergraduate students totaling NIS 20,000,000 (including scholarships provided by external endowment funds). The maximum amount of a scholarship was NIS 4,000.

In 2006/2007 a total of 650 scholarships were awarded to graduate students totaling NIS 5,350,000.

In addition, students in need have at their disposal a series of loans available at particularly comfortable conditions. Loans were taken in the past year by 420 students. The University's participation in payment of the interest on the loans totaled NIS 350,000.

### **Counseling Services for Students**

The Counseling Services provides psychological support and assistance for students who require it. The services are provided by expert psychologists, considered to be of very high quality in their field. In the past academic year, about 400 students received counseling services through the Office of the Dean of Students. The treatment is provided to students at a cost lower than customary in the private market. The service also provides an emergency service where students can call a "crisis center" for immediate response and help.

### **In conclusion**

In addition to the University being an institution for higher education, the University is a temporary home to nearly 22,000 students. The Office of the Dean of Students, with the University academic and administrative community and with the Students Union, is devoted to making every effort to transform the years spent at the Hebrew University into an enjoyable and memorable experience for young people and to provide an atmosphere of tolerance and pluralism throughout the University's campuses.

Prof. Esther Shohami  
Dean of Students

Ms. Noga Zimring  
Associate Dean of Students



## **HILLEL: The Foundation for Jewish Campus Life**

Studying at the university is a unique time in young people's lives when they are searching for their individual paths and are choosing the values, beliefs and opinions that will direct their future footsteps. In the university setting, Hillel has a golden opportunity to engage young adults to explore their Jewish identity in a way that resonates for them. Hillel's mission is to enrich the lives of students with meaningful Jewish experiences so that their lives may enrich the Jewish people and the world.

Hillel actively engages Jewish students on their own terms, and provides them with opportunities to define and celebrate their Judaism in ways that are meaningful for them. Hillel encourages students to take ownership of their Jewish identity and expression: from participating in community service projects to creating art and theater productions; from informal Jewish learning opportunities to cultural and social gatherings. Hillel is committed to a pluralistic Jewish vision that embraces all movements and streams of Judaism.

Hillel: The Foundation for Jewish Campus Life was established at the Hebrew University in 1951 and is the address for a multitude of informal educational, social and religious programs as well as cultural events and seminars on campus geared for the diverse student population. Beit Hillel at the Hebrew University Mt. Scopus campus also contains the Division office for all of Hillel Israel, which also includes Hillel Centers at Tel Aviv University, Ben-Gurion University of the Negev, the Interdisciplinary Center (IDC) Herzliya, Haifa University, the Technion, Sapir College in Sderot, Emek Yezreel College in Afula, and Tel Hai College in Kiryat Shmonah.

Hillel at the Hebrew University has a strong and committed staff, as well as student leaders, coordinators, and volunteers. Students are encouraged to join existing programs or initiate their own projects according to their own needs and interests as well as the needs of the various populations who comprise the campus community.

The following are some examples of Hillel programs at the Hebrew University:

**Jewish Renaissance:**

***Yedidi Hashachachta? (My Friend, Have You Forgotten?)***

This program brings Israeli musicians/artists to perform and offer new readings of traditional North African and Arabic *piyutim* (Jewish liturgy and poetry), while also holding an open dialogue with a leading *paitan* (singer of traditional melodies), who offers readings of the text from a variety of traditional, historical and religious approaches.

***P'sifas (Mosaic)***

This popular program brings students together for practical and intellectual workshops on Jewish topics. *P'sifas* includes weekly workshops in yoga, photography, the Jewish bookshelf, Ethics of the Fathers, the concepts of good and evil, and medical clowning. Students are invited to offer their personal understanding and readings of a variety of Jewish texts and topics.

**When the Yeshiva and the University Meet**

In this program university students meet with yeshiva students in an open atmosphere, to discuss issues that are common to both groups. By sharing their different world views with one another, the students can reach a new level of understanding and cooperation.

***Bein HaShurot: Immigrant Students' Project*** – This project serves as a creative outlet for immigrant students, specifically from Russian-speaking backgrounds, who are exploring their Jewish and Israeli identities while integrating them with their cultural roots. The project consists of three parts: a creative writing workshop, a theater group, and a trivia game team, all of which hold weekly meetings, special events, and public activities. The project fosters a warm, accepting environment in which immigrant students are encouraged to ask questions, engage in dialogue, learn about Jewish life, and give free rein to their creativity, to find answers and build leadership skills.

**Israeli Culture:**

**In the Backstreets** – Guided tours through little-known neighborhoods in Jerusalem, accompanied by stories about the history and culture of the area.

**Through Words** – Professional writers come to Hillel to discuss their writings and their Jewish stories.

**Jerusalem Inspiration** – The fascinating city of Jerusalem inspires students to write poetry, which they present in open poetry readings to a campus audience.

**Rock Hodesh** – Singers, prominent thinkers, and students meet at the beginning of the Jewish month – *Rosh Hodesh* – for music and discussions.

**Mishpat Echad** – Students from the law school discuss legal issues from various Jewish viewpoints.

**Social Activism:**

**Halas: Incubator for Student Organizations for Social Change** - *Halas* is an Israeli acronym for an umbrella student organization committed to social change. This forum focuses on training student leaders to confront societal issues through cooperation, dialogue, and activism. This student-run forum offers a platform for all student groups to find a voice and be active for social change. *Halas* includes the following groups: Social Justice, The Green Group, Quality Government, Social Workers' Student Board, and students helping refugees in Israel.

**Zachor v'Kabed: Relating to the Holocaust through Study and Personal Contact** - By studying the history of the Holocaust (*Shoah*), the roots of anti-Semitism, and the many aspects of its effects on the Jewish people, students gain a better, deeper understanding of the events and are able to make their voices heard against anti-Semitism, discrimination, and human rights abuse. Students also build relationships with Holocaust survivors, helping the survivors in their everyday lives, and relating to them on a personal, meaningful level.



