

• **Dr Naomi Tsafnat**, a post doctoral fellow at the Electron Microscope Unit of the University of Sydney visited the laboratories of Professor Ital Bab at HU to engage in a collaborative project aimed at verifying a new mCT (microcomputed tomography) technique available in the Bab lab which aims to provide a better understanding of the contribution of bone density to its functional properties.

On returning to Sydney, Dr Tsafnat reported that she and Professor Bab plan to continue the collaboration initiated by this visit as their experiments suggest this technique *does* offer great potential for important fundamental studies in the fields of bone micromechanics as well as for tooth implant design.

• **Professor Sara Japhet** from the Department of Bible and the Orion Center at HU will visit the Department of Hebrew, Biblical & Jewish Studies at the University of Sydney later this year with the Fund's support. Professor Japhet is a leading Israeli scholar in Bible with an international reputation in the field.

During her visit, Professor Japhet will share her expertise in the biblical Book of Chronicles with first year Biblical Studies students. Her knowledge will greatly enhance the Department's teaching in this area. She will also run a postgraduate seminar and contribute to the Department's Classical Hebrew program.

• SZCUF STUDENT EXCHANGE PROGRAM



Ori Hirschberg

Ori Hirschberg, whose undergraduate studies at the Hebrew University combined physics and maths undertook a semester of student exchange in Semester I, 2006 to pursue non-scientific subjects in greater depth before embarking on what he believes will become his career path in physics. Courses he took allowed him to explore contemporary themes in film-study, photography and Australian culture.

Reporting on his exchange he wrote, "Perhaps the most significant aspect of my Sydney experience was the opportunity to meet Australians as well as people from all over the world made possible by staying at International House. Through the intercultural activities fostered there, I had the opportunity to meet and befriend people from around the globe, and to be exposed to many different cultures including, the unique opportunity to meet and talk to people from neighbouring Middle Eastern countries such as Lebanon and Iran."

He concluded his report with what well sums up one of the major reasons for fostering student exchange, "While I cannot say whether they will directly contribute to the future of my academic career, which will probably revolve around physics, I have no doubt that the people I have met, and the cultures I have come to know more about, will contribute both to my career as a scholar and to my future as a human being."



Yifat Pinhasi

Yifat Pinhasi while studying for her Masters Degree in criminal law at HU, undertook exchange in Sydney during Semester II, 2006 fulfilling a dream to return to Sydney after a visit in 2002.

With a strong commitment to social justice, Yifat saw law as the natural course of study for her. During her years as a law student she has also been actively involved in social change as a volunteer working with street-kids. Focused on her interests at the University of Sydney, Yifat's courses included "Theories of Criminology" and a course called "Young people, crime and the law". Yifat found her academic experience in Sydney provided a wide perspective and an opportunity to learn a lot about juvenile delinquency in Australia. Much of this was learnt from first-hand experiences of fellow students most of whom, being Masters candidates, had already been working as lawyers for many years.

The exchange also provided Yifat with her first opportunity to get to know people from a variety of Asian countries which she greatly appreciated. She was also glad to play the role of an Israeli ambassador to both Australians and other people who knew little about Israel today or Judaism in general.

Concluding her report about her exchange she wrote, "I am sure that the broader perspectives I have gained during this exchange, will enable me to give more in the future to society and in this way to pass on to others the generosity extended to me by the Fund in assisting my exchange."

SIR ZELMAN COWEN UNIVERSITIES FUND

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NEWSLETTER

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BIO-INFORMATICS PIONEER AWARDED SZCUF PRIZE FOR INAUGURAL HEBREW UNIVERSITY PRESENTATION

Professor Nir Friedman from the School of Engineering and Computer Sciences at the Hebrew University of Jerusalem is the winner of the 2007 award of the **Sir Zelman Cowen Universities Fund Prize for Discovery In Medical Research**. Established in 2005 to recognise the work of young scientists, the Prize is presented in alternate years at the University of Sydney and the Hebrew University of Jerusalem. The inaugural Prize was awarded in 2006 in Sydney to Mr Mark Elkins, a research physiotherapist undertaking doctoral studies at the University of Sydney, for his work on a groundbreaking treatment for cystic fibrosis. Professor Friedman will be the first recipient of the Prize at the Hebrew University.



Prof Nir Friedman

"Understanding the cell is one of the great scientific challenges of our day," wrote one of Professor Friedman's referees. "Particularly, since the completion of the Human Genome Project, scientists have found themselves awash in data, but without the methodology to synthesise this data into scientific explanation. Nir Friedman, is at the forefront of work that shows great promise in solving this dilemma."

Professor Friedman is recognised as one of the leading experts in the world for machine learning and its application to biology. Machine learning is concerned with the automatic extraction of rules and relationships from large amounts of data. As such, it has developed into a prime tool in the analysis of today's genomic data. This integration of mathematical and computational modelling with the experimental discovery process now constitutes the core of the new field of *systems biology*, of which Professor Friedman is a leading exponent. Utilising this approach, systems biology strives to identify design principles that govern the organization and behaviour of components of living cells and organisms. These techniques allow clinicians and researchers to, for example, scan the genome of a patient

and identify their susceptibility or resistance to disease. One of Professor Friedman's priority projects has been the development of an analysis of an individual's genes, to assess who is likely to suffer severe post-traumatic stress after a terror attack or other trauma.

Systems biology holds promise of finding ways to accelerate drug discovery by providing insight into the best targets for modulating cellular signalling pathways. Systems approaches are also likely to provide new ways of understanding still-incurable diseases.

Professor Friedman's work was selected for this award for its broad clinical application to many fields of medicine. The award, worth \$5,000 will be presented to Professor Friedman at the Meeting of the Board of Governors of the Hebrew University in Jerusalem on 6 June, 2007 by Fund Trustee, Mr Michael Dunkel who is also a member of the HU BOG.

Nominations for the Award to be presented in 2008 will be called for in September 2007 from scientists at the University of Sydney. The 2008 Award will be sponsored by the **Schwartz Family Foundation**.

Information about the Prize can be found at www.szcu.org.usyd.edu.au. Click on *Prize*.

For more information about Professor Friedman's work visit www.cs.huji.ac.il/~nir/index.html

FUND PRIZE AWARD EVENT - 2006

A luncheon jointly hosted by the Vice-Chancellor of the University of Sydney, Professor Gavin Brown and the Fund's Trustees, was held on 18 August 2006 at the University of Sydney to present the inaugural award of the Fund's prestigious new prize for medical research.

Professor Brown presented the prize – a medallion and a cash award of \$5,000 - to Mr Mark Elkins, for his work on cystic fibrosis. Mr Elkins, Research Physiotherapist at RPA Hospital, Sydney is a PhD candidate in the University of Sydney's Medical Faculty.

Mr Elkins gave an informative presentation to guests at the luncheon who included Fund supporters, dignitaries of the University, members of Cystic Fibrosis NSW and of the Australian Physiotherapy Assoc (NSW), as well as members of the media and colleagues of Mr Elkins.



Prof Gavin Brown presenting the award to Mr Mark Elkins



Mark Elkins supervisor Prof Peter Bye (cntr), nominator Prof Iven Young, HOD Respiratory Medicine, RPA and members of RPA CF Research, Str Carmel Moriarty & Ms Janet Bevan (front)

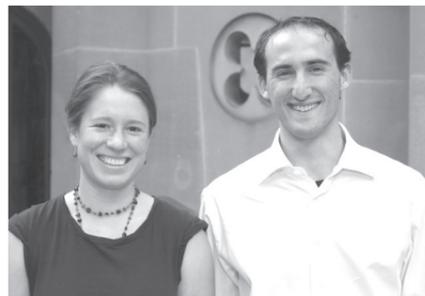
FUND INITIATES ANOTHER NEW VENTURE

The Fund has established a new student fellowship to support 4th Year Medical Students of the University of Sydney to undertake their medical elective term at the Hebrew University in Jerusalem.

The **Sir Zelman Cowen Universities Fund Hebrew University Medical Elective Term Fellowship** is an exciting new venture which has a perfect fit with the Fund's aim of supporting research and laying the foundation for cooperative work between the two Universities. This exchange provides students the opportunity to gain an appreciation of Israel's advanced status in clinical medicine and its high standards of biomedical research. Personal and professional links forged during such an exchange are also likely to promote cooperative work between the two Universities through the future professional lives of these students.

The first students to be awarded these Fellowships, Anna Fisher and Simon Nothman, undertook their Elective Term at the

Hadassah Hospital at Ein Kerem during December 2006 and January 2007. Anna spent time in the Orthopaedic Department and in Intensive Care. Simon, undertaking an honours program on the topic of Trauma Systems, selected Hadassah for its status as a Level 1 Trauma Centre and tertiary care facility. Also of interest was its ethos of equality in the provision of medical services (one reason that it was nominated for the Nobel Peace Prize in 2005) as this principal means that even perpetrators of terror attacks are treated without judgement here.



Anna Fisher and Simon Nothman

During their Term, both Simon and Anna had many and varied clinical experiences. Both were highly impressed by the quality of care and medical practice they found in the hospital and the way everyone from students to top surgeons helped them, with doctors in clinics and ward rounds translating or conducting the proceedings in English for their benefit. But then multilingualism, is *routine* in this hospital where, as Anna reports, "In the operating theatres at least Hebrew, Arabic, English and Russian are spoken at the same time and (she) met doctors from all corners of the earth, from various religious and cultural backgrounds. Communication was a shared adventure, where all attempts to communicate were appreciated".

Both Anna and Simon returned to Sydney keen to recommend to others an Elective Term at Hadassah.

FUND WELCOMES NEW TRUSTEE

At their December 2006 meeting, the Trustees of the Fund welcomed Professor David Celermajer as one of two Fund Trustees representing the University of Sydney. Professor Celermajer is Scandrett Professor of Cardiology at the University of Sydney.



Prof David Celermajer

Professor Celermajer succeeds Professor Andrew Coats who resigned from Trusteeship of the Fund in December 2006 when he took up his current role as the University's Deputy Vice-Chancellor (Community).

FROM TEST TUBE TO TREATMENT Updates from latest research on major health issues

In conjunction with the Bosch Institute at the University of Sydney, the Fund hosted the third of these informative seminars in March 2007 focusing on **Cystic Fibrosis & Asthma**. This gave an opportunity for more of the Fund's supporters and members of the general public to hear about the work of Mark Elkins, 2006 winner of the Fund's Prize for Discovery in Medical Research for his work on cystic fibrosis. In addition, Professor Peter Bye gave a related presentation about other work underway to improve the quality of life of CF sufferers with the aim of maintaining optimum health for ultimate bilateral lung transplantation.



Prof Christine Jenkins

In the second half of the program Professor Christine Jenkins from the CRC for Asthma and Airways at the Woolcock Institute spoke about a study carried out to ascertain the efficacy of "breathing techniques" in the management of asthma. She outlined why the study was undertaken, the results and implications for asthma management.

The evening concluded with a presentation by Professor Judy Black, NHMRC Snr Principal Research Fellow in Pharmacology, University of Sydney. Professor Black focused on asthma sufferers whose disease control is not optimal despite the significant advances in asthma therapy now helping the majority of sufferers. In particular she concentrated on those suffering from a rare disorder commonly known as LAM (Lymphangiomyomatosis) which, because of its similarities to asthma, is often mis-diagnosed and treated as asthma.



Prof Judy Black

LAM is a disorder of unknown origins, characterized by an unusual type of muscle cell that invades the tissues of the lungs, including the airways and blood and lymph vessels. Over time, these muscle cells obstruct the flow of air, preventing the lungs from providing oxygen to the rest of the body. LAM occurs almost exclusively in women, usually between the onset of puberty and menopause. Because the disease affects women, scientists believe it is hormonally related.

Further information about LAM can be found at www.thelamfoundation.org and at www.lungusa.org/site/pp.asp?c=dvLUK900E&b=36285. Links to the work of the other speakers can be found at www.szucf.org.usyd.edu.au. Click on *Presentations* or call the Fund on (02) 9351 6558.

IBR/BOSCH PROJECT REPORT Fund continues support to IBR/Bosch

Since 2001 the Fund has supported the work of the **Institute for Biomedical Research** at the University of Sydney. In 2006 the IBR was incorporated into the **Bosch Institute**, a new joint venture of the University and Sydney South-West Area Health Service. The new Institute incorporates approximately 65 groups carrying out international quality research including Cancer, Cardiovascular and, Organ and Tissue Renewal.

Following the success of funding provided during 2001 - 2005 for the establishment of a Molecular Biology Facility (MBF) the Fund is now assisting the Institute in establishment of a cytometry facility which houses the latest equipment available to enable scientists to *count and sort cells* as an integral part of their investigations.

In August 2006, Dr Sabita Rana was appointed to the position of **Sir Zelman Cowen Universities Fund Flow Cytometry Officer** to maintain, upgrade and train others in the use of this sophisticated and valuable equipment.

This excellent facility now attracts users from various departments of the University both within and outside the Institute as well as researchers from outside the University.

At a recent meeting, evaluating a report from Bosch director, Professor Nick Hunt on the work of the Facility, the Fund's Trustees concluded that "seed funding" provided to the Facility is reaping far reaching dividends.

OTHER FUND INITIATIVES

• SZCUF ACADEMIC EXCHANGE PROGRAM

• **Dr Zeev Mankowitz** of the Melton Center for Adult Education at the HU received the Fund's support to visit Sydney in July 2006 to collaborate with Dr Sharon Kangisser-Cohen, Honorary Research Associate, Department of Semitic Studies, University of Sydney on a new text for high school students. The planned publication will be an educationally informed volume of Holocaust survivor testimonies, stories and reflections for high school students. It will contain survivor accounts, guiding questions and further reading for the students and lesson plans for teachers.

The researchers believe this is a timely initiative given the wide array of materials to choose from, the ever-diminishing number of survivors in our midst and their critical, ongoing contribution to Holocaust education.