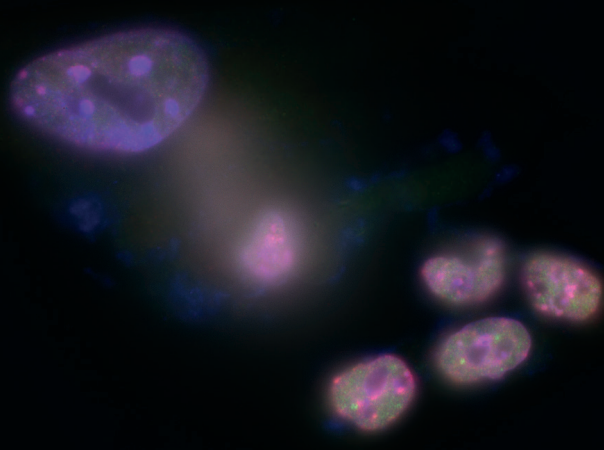


# SIR ZELMAN COWEN UNIVERSITIES FUND PRIZE

FOR DISCOVERY IN  
MEDICAL RESEARCH

June 2013



The Authority for  
RESEARCH AND DEVELOPMENT



SIR ZELMAN COWEN UNIVERSITIES FUND



## The Fund

**The Sir Zelman Cowen Universities Fund** was established in 1978 to raise funds for medical & scientific research and to lay the foundation for cooperative work between the University of Sydney and the Hebrew University of Jerusalem for the mutual benefit of both institutions. It is located at the University of Sydney, in the historic Anderson Stuart Building, the original home of Australia's first Medical School. All grants made by the Fund are disbursed to the University of Sydney for projects nominated by the Fund's trustees at both Universities.

Since 1978 the **Fund** has provided millions of dollars for the support of medical research in a wide range of disciplines - the development of cultured skin for the treatment of burns and infection, the management of maturity onset diabetes, the control of pulmonary blood flow, fundamental research into the function of the heart and central nervous system, the molecular biology of AIDS and of other infectious diseases, and the study and early diagnosis of Alzheimer's disease. Since 2000, the Fund has also supported a program of academic and student exchange between the two Universities which is funded by a special donation from the John Hammond Trust. In addition, the Fund has provided support to the Orion Center at the Hebrew University, the Bosch Institute at the University of Sydney and it established the Fund Prize in 2006.

## The Founder



**Mr John Hammond**, a Sydney businessman, established the Fund in 1978. It was his view, and part of his vision for the Fund, that the development of therapies for still-incurable diseases required fundamental research. Projects supported by the Fund have reflected this view.

In recognition of his tireless fund-raising efforts, Mr Hammond was presented with an Honorary Fellowship by the Hebrew University in 1981 and an Honorary Doctorate in 1991 and was made an Honorary Fellow of the University of Sydney in 1993. He was also appointed Honorary Life President of the NSW Friends of the Hebrew University in 1980 in honour of his work for that organisation.

Mr Hammond remained a trustee of the Fund until shortly before his death in 1997 and was a most generous benefactor of the Fund.

## Sir Zelman Cowen



**Sir Zelman Cowen** had recently been appointed Governor General of Australia when the Fund was established. To honour this appointment and because of his long established links with both the University of Sydney and the Hebrew University of Jerusalem, the trustees approached Sir Zelman to allow his name to be used in naming the Fund.

Since that time, Sir Zelman served the Fund as a trustee (1992 - 1997) and thereafter provided warm support as Patron of the Fund till his death in December 2011.

## The Trustees

The Fund operates under the guidance of its four trustees, two representing the University of Sydney and two the Hebrew University of Jerusalem.

### Representing the University of Sydney:



**Prof Jonathan Stone**, Managing Trustee, Professor of Retinal and Cerebral Neurobiology, Director Bosch Institute and Challis Professor of Anatomy (1987-2003) at the University of Sydney.

Prof Stone's awards for contributions to scientific research include a Centenary Medal for services to Australian society and science in developmental biology and the Ludwig von Sallman Medal for Vision Research awarded by the International Society for Eye Research. Prof Stone is also a Fellow of the Australian Academy of Science.



**Prof David Celermajer**, Scandrett Professor of Cardiology, University of Sydney; Director of Echocardiography and Clinical Academic Cardiologist, Royal Prince Alfred Hospital Sydney; Clinical Director and Group Leader, Clinical Research, The Heart Research Institute and Cardiologist at the Children's Hospital, Westmead, Sydney.

Prof Celermajer's many awards and prizes for outstanding contributions in his field include the *Commonwealth Health Minister's Award For Excellence In Health And Medical Research*, "for outstanding lifetime achievement in health research". Prof Celermajer is a Fellow of the Australian Academy of Science and a past Rhodes Scholar.

### Representing the Hebrew University of Jerusalem:



**Mr Michael Dunkel**, lawyer, President of the New South Wales Friends of the Hebrew University, member of the Hebrew University Board of Governors.

Mr Dunkel is also a governor of the Orion Foundation which he helped establish to fund various causes and projects including the Orion Center for the Study of the Dead Sea Scrolls.

In 2005, Mr Dunkel became an Honorary Fellow of the Hebrew University and in 2007 the Hebrew University awarded him an Honorary Doctorate in recognition of his services.



**Mr Robert Simons OAM**, engineer and businessman, President of the Australian Friends of the Hebrew University, a past President of the NSW Friends of the Hebrew University, a member of the Hebrew University's Board of Governors and a member of the Hebrew University's Executive Committee.

Mr Simons is also a tireless worker for a number of other Jewish communal organizations.

His role in the Jewish community, and in particular his contribution to education, was recognised by the award of an Order of Australia Medal (OAM) in the 2007 Australia Day Awards.

## Sir Zelman Cowen Universities Fund Prize For Discovery In Medical Research

*Awarded in alternate years at the University of Sydney and at the Hebrew University, the Prize recognizes discovery in medical research carried out at either University by a scientist under 45 years of age.*

It comprises an award of AUSS\$10,000 and a medal crafted by Melbourne sculptor, Michael Meszaros. It is awarded for a discovery which has made a major contribution to the understanding or treatment of disease and has achieved or has the potential to achieve, therapeutic outcomes.

The Prize was established in November 2004 in honour of the Fund's Patron, Sir Zelman Cowen who served as Governor General of Australia from 1977-1982. It was established by a special donation from the John Hammond Trust.



**Dr Mark Elkins**, a Sydney physiotherapist and (at the time) a doctoral candidate, in the Faculty of Medicine at the University of Sydney, was the inaugural recipient of the award, for a groundbreaking treatment for cystic-fibrosis. The award was made in 2006, in Sydney.



**Professor Nir Friedman**, School of Engineering and Computer Sciences, Hebrew University of Jerusalem received the first award of the Prize at the Hebrew University for his pioneering work in the field of bioinformatics. The award was presented in Jerusalem in 2007.

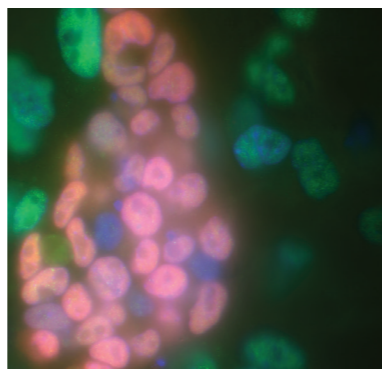
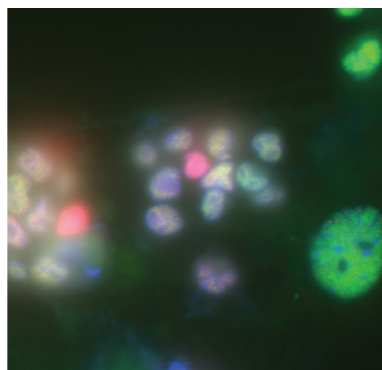
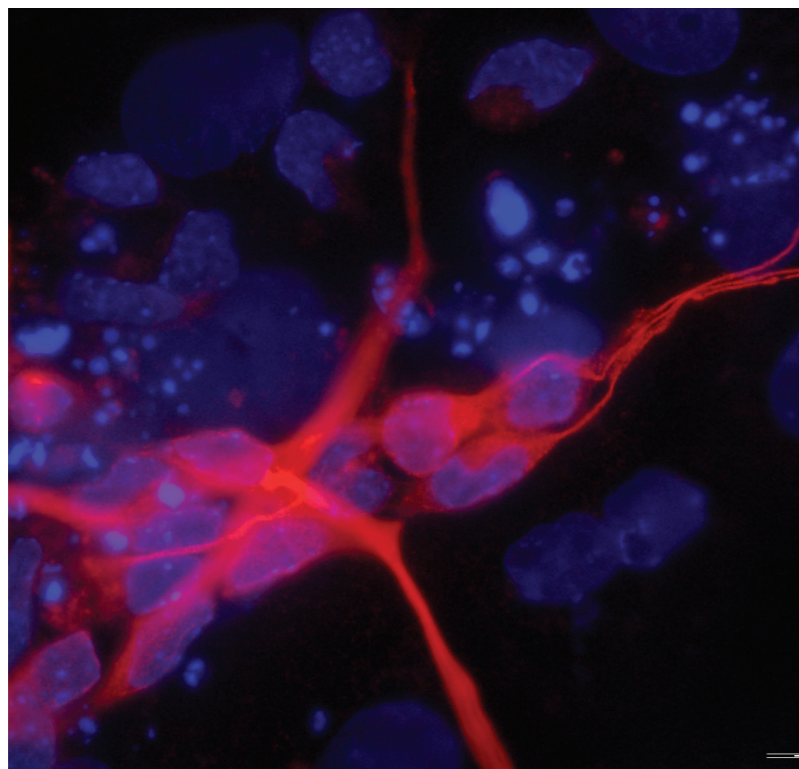


Sir Zelman Cowen  
Universities Fund Prize  
For Discovery In Medical Research



**Professor  
Eran Meshorer**  
Stem Cell Chromatin Lab,  
Alexander Silberman Institute  
of Life Sciences, Hebrew  
University of Jerusalem

Professor Meshorer is an associate professor in the Department of Genetics and Principle Investigator in the Stem Cell Chromatin Lab, Institute of Life Sciences. He completed his BSc, MSc and doctoral studies at the Hebrew University and undertook postdoctoral work at the National Institutes of Health Bethesda USA. On returning to Israel he joined his current department. He has been the recipient of many awards and prizes both for his research and his teaching. In 2011 he was awarded a prestigious ERC Starting Grant. As an internationally recognised pioneer in the stem cell chromatin field, he presents his work at many conferences, reviews publications by others, and is an editor for related publications and books. His many journal articles about his ground-breaking work are frequently cited by other researchers. He is involved in numerous international collaborations.



*Professor Meshorer has been awarded the 2013 Sir Zelman Cowen Universities Fund Prize for Medical Research for the extensive and groundbreaking work undertaken in his laboratory to shed light on the process of pluripotency.*

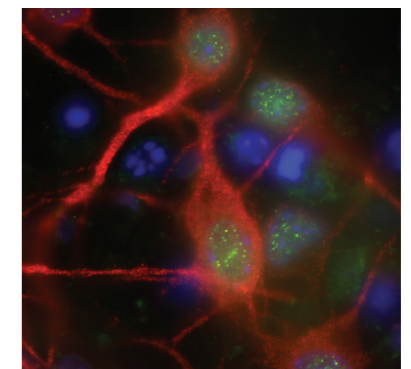
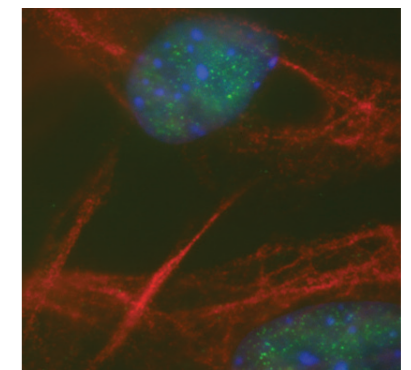
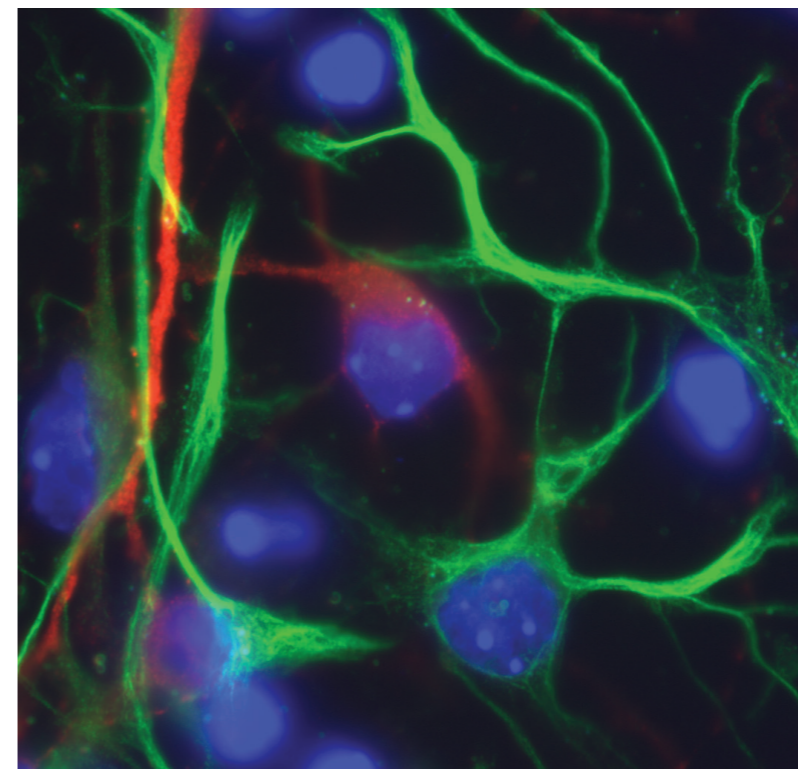
**Pluripotency** is the ability of embryonic stem cells to both renew themselves indefinitely and to differentiate into all types of mature cells. Understanding the mechanisms that make this process possible could allow scientists to replicate it and ultimately enable them to create cells in the laboratory which could be implanted in humans to treat diseases characterized by tissue degeneration, including degeneration of pancreatic cells (as in diabetes), or of central nerve tissue such as the retina (in age-related macular degeneration) or brain (dementia, Parkinsonism).

Combining molecular, microscopic and genomic approaches, Professor Meshorer's team has focused much of its work on the role of chromatin in this process.

Chromatin is DNA plus the proteins that package it within the cell nucleus. It is believed that understanding the mechanisms that regulate chromatin function will enable intelligent manipulations of embryonic stem cells in the future.

The work of his team has produced 'firsts' in this competitive field. Taken together they show that embryonic stem cells maintain their pluripotency by an open/flexible chromatin structure, which is regulated by the action of histone remodeling proteins, histone modifying enzymes and low levels of the nuclear lamina protein Lamin A.

Speaking about his work Prof Meshorer has said, "If we can apply this new understanding about the mechanisms that give embryonic stem cells their plasticity, then we can increase or decrease the dynamics of the proteins that bind DNA and thereby increase or decrease the cells' differentiation potential. This could expedite the use of embryonic stem cells in cell therapy and regenerative medicine, by enabling the creation of cells in the laboratory which could be implanted in humans to cure diseases characterized by cell death, such as Alzheimer's, Parkinson's, diabetes and other degenerative diseases."



## Sir Zelman Cowen Universities Fund Prize PREVIOUS RECIPIENTS The University of Sydney



### 2012 Award

**Associate Professor Barry Slobedman, Discipline of Infectious Diseases & Immunology, University of Sydney and Centre for Virus Research, Westmead Millennium Institute.** The award was presented by Ms Wendy Morel representing the **The Schwartz Foundation**, sponsors of the 2012 award at a luncheon jointly hosted by the Fund and the **NSW Friends of the Hebrew University.**

Associate Professor Slobedman was nominated for discoveries which have profoundly changed our understanding of how the human

cytomegalovirus (HCMV) can persist in a latent state for the life of the human host, despite the presence of a huge anti-viral immune response. The discovery provides a novel drug target for development of therapies to interrupt latency, and limit or prevent the devastating consequences of reactivation in immunocompromised individuals such as transplant patients. It may lead to development of a live HCMV vaccine. Its potential for clinical applications has led to an international patent sponsored by Sydnovate, the commercial arm of the University of Sydney.



### 2010 Award

**Dr Rachel Codd, Discipline of Pharmacology, Faculty of Medicine, University of Sydney.** The award was presented by Dr Jerry Schwartz of **The Schwartz Foundation**, sponsor of the 2010 award of the Prize at a luncheon jointly hosted by the Fund and the **NSW Friends of the Hebrew University.**

Dr Codd was nominated for the development of a range of compounds that may be effective in treating iron overload disease with orally administrable drugs compared with current therapy requiring intravenous infusion. The compounds may also have application in neurodegenerative diseases such as Parkinson's disease, where irregular iron levels have been implicated as contributing factors.



### 2008 Award

**Dr Catherine Leamey, Discipline of Physiology, School of Medical Sciences, University of Sydney.** The award was presented in Sydney, by Mr Malcolm Turnbull, MP at a special event in November 2008 which also celebrated the 30th Anniversary of the Fund's inception.

Dr Leamey's work was nominated for the identification of a gene, *Ten\_m3*, which is essential for binocular vision and which has been shown to have important implications for the development of therapies for both visual and developmental brain disorders such as autism and mental retardation. The award to Dr Leamey recognises the potential of her findings to aid in the development of new approaches in the treatment of these conditions.



### 2006 Award

**Dr Mark Elkins, Research Physiotherapist at the Royal Prince Alfred Hospital, Sydney who, at the time of the award, was a PhD candidate in the Faculty of Medicine at the University of Sydney.** Dr Elkins was the inaugural recipient of the award which was presented, in Sydney, August 2006 by the Vice-Chancellor of the University of Sydney, Prof Gavin Brown.

Dr Elkins' award-winning research established a new, low-cost, long-term therapy for cystic fibrosis through a multi-centre, randomised, clinical trial.

## Sir Zelman Cowen Universities Fund Prize PREVIOUS RECIPIENTS Hebrew University of Jerusalem



### 2011 Award – shared

**Dr Eli Pikarsky, Hadassah Medical School, Hebrew University of Jerusalem.** The award was presented by Mr Robert Simons OAM, Fund Trustee, President of the Australian Friends of the Hebrew University and member of the HU Board of Governors at the HU BOG Meeting, Jerusalem, June 2011.

Dr Pikarsky was nominated for insights gained from his work in complex mouse models, into the pathogenesis of human disease. His work has yielded new understanding of the determinants of malignancy in testicular cancer; of the impact of inflammation on the progress of liver cancer and the regulation of liver regeneration, important in all conditions which damage liver function.



**Associate Professor Sigal Ben-Yehuda, Faculty of Medicine, Hebrew University of Jerusalem.** The award was presented by Mr Robert Simons OAM, Fund Trustee, President of the Australian Friends of the Hebrew University and member of the HU Board of Governors at the HU BOG Meeting, Jerusalem, June 2011

Associate Professor Ben-Yehuda was nominated for her contributions to our understanding of the biology of bacteria. Her discoveries, which include the demonstration of a previously unknown 'nanotube' form of communication between cells, are also fundamental for understanding the mechanisms of bacterial resistance to antibiotics. This gives her work great importance for the treatment of infections caused by the growing number of resistant bacteria.



### 2009 Award

**Dr Adi Mizrachi, Department of Neurobiology, The Alexander Silberman Institute of Life Sciences, Hebrew University of Jerusalem.** The award was presented by Mr Michael Dunkel, Fund Trustee and member of the HU Board of Governors at the HU BOG Meeting, Jerusalem, June 2009.

Dr Mizrachi was nominated for his contribution to the understanding of synapse formation (nerve connections) in the central nervous system (CNS), and for the importance of his group's findings for the development of techniques of CNS repair. These new approaches developed by Dr Mizrachi's team are essential steps towards therapies which will allow the regeneration of brain structures from stem cell technology



### 2007 Award

**Professor Nir Friedman, School of Engineering and Computer Sciences, Hebrew University of Jerusalem.** Prof Friedman was the first recipient of the Prize at the Hebrew University. The award was presented by Mr Michael Dunkel, Fund Trustee and member of the HU Board of Governors at the HU BOG Meeting, Jerusalem, June 2007.

Professor Friedman was nominated for his pioneering work in the field of bioinformatics. He was selected for the award because of the broad application of his work to many fields of medicine.

Further information about the work of all Prize-winners can be found by following the links on the Fund's website at [sydney.edu.au/szcuf/prize/announcements.shtml](http://sydney.edu.au/szcuf/prize/announcements.shtml)

Sir Zelman Cowen Universities Fund  
... investing in the future through medical research

The Hebrew University of Jerusalem  
The Authority for Research and Development  
<http://ard.huji.ac.il>  
Tel: 972-2-658-6625/6/8 Fax: 972-2-652-9764

Sir Zelman Cowen Universities Fund  
University of Sydney F13  
NSW 2006 AUSTRALIA  
[www.szucf.org.usyd.edu.au](http://www.szucf.org.usyd.edu.au)  
Tel: +61 2 9351 6558 Fax: +61 2 9351 6557  
Email: [szucf@anatomy.usyd.edu.au](mailto:szucf@anatomy.usyd.edu.au)

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