THE SIR ZELMAN COWEN UNIVERSITIES FUND PRIZE FOR DISCOVERY IN MEDICAL RESEARCH
AT THE HEBREW UNIVERSITY OF JERUSALEM

June 2017
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 trustees of 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 2001.

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

Professor 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 Salimann Medal for Vision Research awarded by the International Society for Eye Research. Prof Stone is also a Fellow of the Australian Academy of Science.

Representing The Hebrew University of Jerusalem:
Mr Michael Dunkel, lawyer, co-President of the New South Wales Division of the Australia 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.

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.
Dr. Yossi Buganim

Regenerative Medicine

Yossi Buganim received undergraduate degrees from Bar-Ilan University and a Ph.D. from Weizmann Institute of Science. As a postdoctoral fellow at Whitehead Institute for Biomedical Research, MIT, Dr. Buganim exploited single-cell technologies along with bioinformatic approaches to shed light on the molecular mechanisms underlying somatic cell undergoing reprogramming to embryonic stem-like cells. Currently, his own laboratory, at The Hebrew University, is focused on multiple in vitro and in vivo somatic cell conversion models to allow the generation of multiple cell types for future clinical use.

Regenerative medicine is a new and developing field aimed at engineering, regenerating or replacing human cells, tissues or organs, in order to establish or restore normal function. Embryonic stem cells (ESCs) have enormous potential in this area because they can differentiate into all cell types in the human body. However, two significant obstacles prevent their immediate use in medicine: ethical issues related to terminating human embryos, and rejection of foreign cells by the patient’s immune system. The creation of ES-like cells from skin cells, induced pluripotent stem cells (iPSCs), resolved both issues.

Despite these cells’ enormous potential, their quality is still not sufficient to be used in clinical practice, and there is a need to find the best protocol that will enable production of high-quality iPSCs that will not pose a danger to patients.

Dr. Buganim’s laboratory has made two major breakthroughs in this area, representing major steps forward in the field of regenerative medicine and transplantation.

Project A

In order to improve the quality of embryonic stem cells, Dr. Buganim and his colleagues conducted bioinformatic analyses which pointed to four new key genes capable of creating iPSCs from skin cells, of superior quality to stem cells in current use. These cells (in this case mouse cells) are able to clone a whole mouse with much greater success (80%) than other iPSCs (30%). This test is the most important one determining the quality of the cells.

Project B

Many women suffer recurrent miscarriages and abnormal placentas, which causes fetal growth restriction that can lead to mental retardation. Dr. Buganim’s laboratory found the key genes of the placenta stem cells and by expressing them in surplus in skin cells, created induced placental stem cells. These cells looked and behaved like natural placental stem cells. Various quality tests showed that these cells have cell-generating capability in vitro and inside a placenta that develops following a transplant. The success of this project may enable women with placenta problems to give birth to healthy children.
2016 Award
Professor Georgina Long
Melanoma Medical Oncology and Translational Research, Melanoma Institute Australia
Professor Long was nominated for her extensive contribution to the field of melanoma research and clinical services.

2014 Award – shared
Associate Professor Anthony Gill, Sydney Medical School, University of Sydney and Senior Staff Specialist, Dept of Anatomical Pathology Royal North Shore Hospital
Professor Gill was nominated for his contributions to our understanding of a number of gastrointestinal and renal cancers.

Associate Professor Ostojic (Steve) Vucic, Sydney Medical School, University of Sydney and Senior Staff Specialist, Dept of Neurology, Westmead Hospital
Professor Vucic was recognised for his discovery of a unique mechanism underlying amyotrophic lateral sclerosis (ALS).

2012 Award
Associate Professor Barry Slobedman, Discipline of Infectious Diseases & Immunology, University of Sydney and Centre for Virus Research, Westmead Millennium Institute
Professor Slobedman was nominated for his discoveries about the human cytomegalovirus (HCMV).

2010 Award
Dr Rachel Codd, Discipline of Pharmacology, Faculty of Medicine, University of Sydney
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.

2008 Award
Dr Catherine Leamey, Discipline of Physiology, School of Medical Sciences, University of Sydney
Dr Leamey’s work was recognised for the identification of the Ten_m3 gene, which is essential for binocular vision.

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. He was recognised for establishing new, low-cost, long-term therapy for cystic fibrosis.

2015 Award
Associate Professor Assaf Friedler, School of Chemistry, The Hebrew University of Jerusalem
Professor Friedler was nominated for his groundbreaking work in protein intercation as targets for drug design.

2013 Award
Associate Professor Eran Meshorer, Dept of Genetics, Silberman Institute of Life Sciences, The Hebrew University of Jerusalem
Professor Meshorer was awarded the Prize for his work on pluripotency.

2011 Award – shared
Dr Eli Pikarsky, Hebrew University-Hadassah Medical School, The Hebrew University of Jerusalem
Dr Pikarsky was nominated for insights gained from his work in complex mouse models, into the pathogenesis of human disease.

Associate Professor Sigal Ben-Yehuda, Institute for Medical Research Israel-Canada, Hebrew University-Hadassah Medical School, The Hebrew University of Jerusalem
Professor Ben-Yehuda was nominated for her contributions to our understanding of the biology of bacteria.

2009 Award
Dr Adi Mizrahi, Department of Neurobiology, Silberman Institute of Life Sciences, The Hebrew University of Jerusalem
Dr Mizrahi was nominated for his contribution to the understanding of synapse formation (nerve connections) in the central nervous system (CNS) and for the development of techniques of CND repair.

2007 Award
Professor Nir Friedman, Benin School of Engineering and Computer Science, The Hebrew University of Jerusalem
Professor Friedman was nominated for his pioneering work in the field of bioinformatics.

2008 Award
Professor Sir Zelman Cowen Universities Fund Prize – shared
The Hebrew University of Jerusalem
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