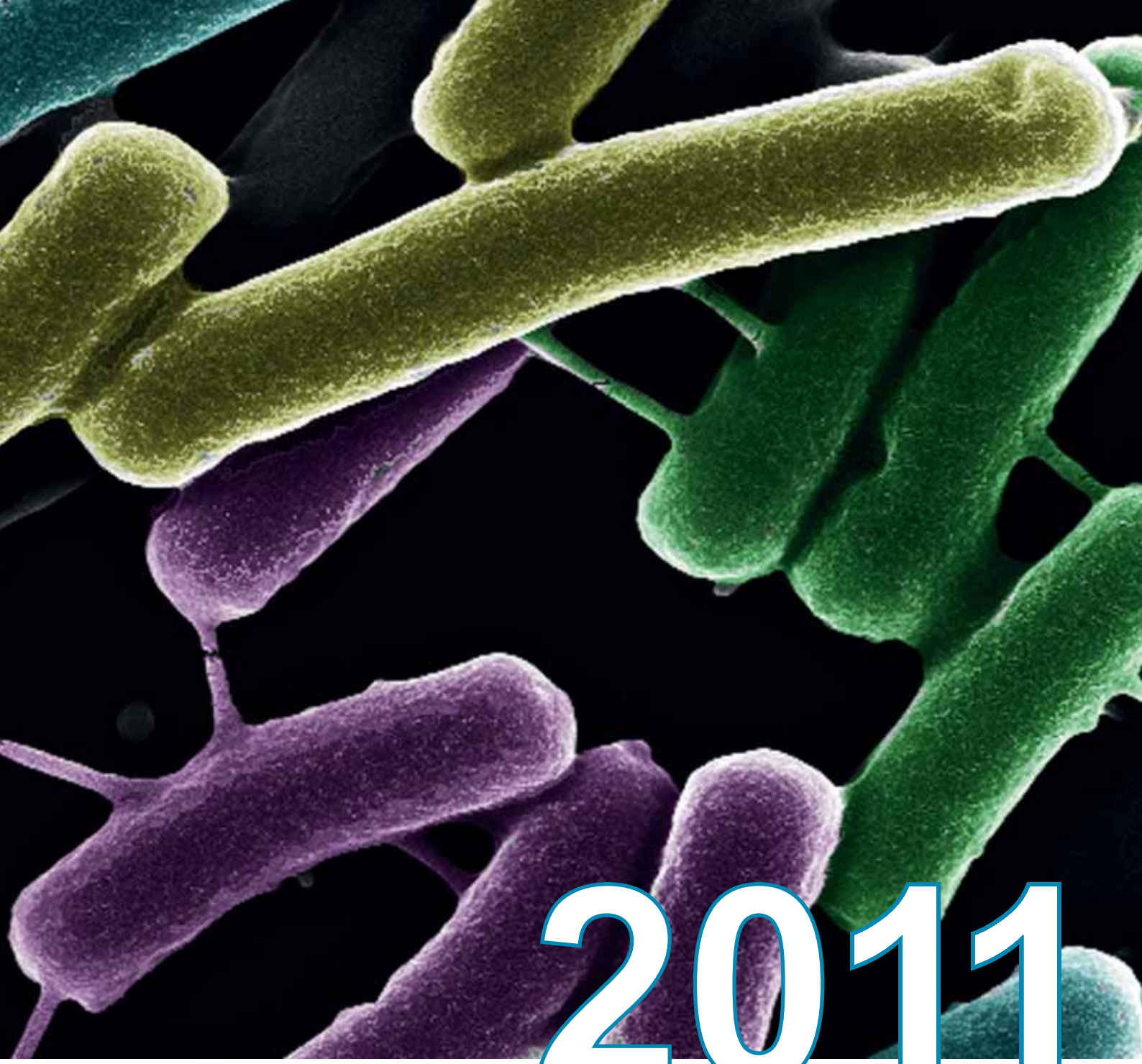


2011

Sir Zelman Cowen Universities Fund Prize for Discovery in Medical Research

June 2011 תשע"א

האוניברסיטה העברית בירושלים
The Hebrew University of Jerusalem

The Authority for
RESEARCH AND DEVELOPMENT

THE UNIVERSITY OF SYDNEY

SIR ZELMAN COWEN UNIVERSITIES FUND

COWEN

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 has served the Fund as a trustee (1992 - 1997) and now continues to provide warm support as Patron of the Fund.

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. He is 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 Hebrew University Board of Governors. He 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 he was awarded an Honorary Doctorate by the same university 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 AUS$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.

COWEN PRIZE

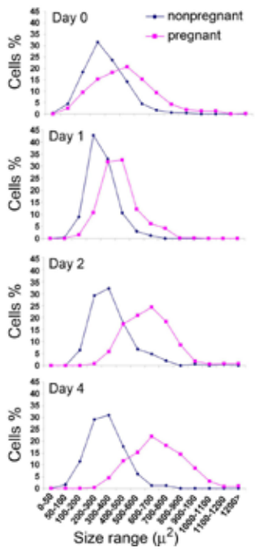
Dr Eli Pikarsky Dr Eli Pikarsky is a Senior Lecturer in the Lautenberg Center for Immunology and Cancer Research, Faculty of Medicine, Hebrew University of Jerusalem. Dr Pikarsky holds an MD and PhD from the Hebrew University. His clinical expertise is in pathology and his research focuses on the molecular pathology of cancer. He has served as a Resident and Senior Staff Pathologist in the Department of Pathology, Hadassah-Hebrew University Medical Center.

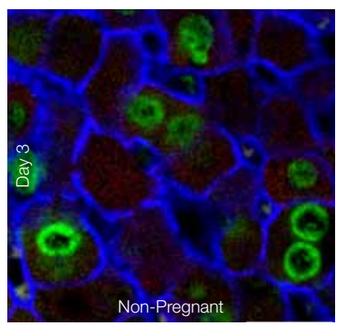
He serves on many University committees, is a reviewer for top scientific journals including Science signaling, Proceedings of the National Academy of Science, Molecular Cell, and Cancer Research and he is a member of the research committee of the Israel Cancer Association.

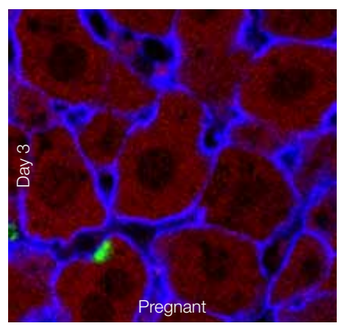
He has published extensively in prestigious journals such as Cancer Cell, Nature and Genes and Development. He is a frequent presenter at international conferences and is involved in numerous international collaborations. Awards he has received in recognition of his work include the **Golda Meir Fellowship, The Daniel G. Miller Research Career Development Award – ICRF, The Jacob Schafer award for excellence in research Hebrew University.**

2011 SIR ZELMAN COWEN UNIVERSITIES FUND PRIZE FOR DISCOVERY IN MEDICAL RESEARCH

Dr Pikarsky was nominated for insights gained from his work in complex mouse models, into the development of human disease in particular in the fields of testicular cancer, liver cancer and the regulation of liver regeneration.







In his work on testicular cancer, published in **Cancer Cell**, Dr Pikarsky showed that the gene *Oct4* is expressed at very early stages of testicular cancer. In a mouse model, his work showed the levels of *Oct4* present were directly linked to the level of cancer development, and that "silencing" the expression of *Oct4* led to tumour regression. In addition, he demonstrated that over-expression of *Oct4* correlates with the degree of malignancy in testicular cancer, establishing *Oct4* as an oncogene and as a sensitive marker of disease.

In his work on liver cancer, Dr. Pikarsky showed that chronic inflammation activates a signalling pathway in liver cancer cells, which prevents cell death and accelerates tumour progression. For over a century, scientists have suspected a link between chronic inflammation and cancer. Dr. Pikarsky's work has clarified that link and illuminated internal processes of cancer development. This work was published in **Nature**.

In a third group of studies, based on observations in pregnant mice, Dr Pikarsky identified ways of accelerating the regeneration of the liver. This work, published in **Genes and Development**, has laid the foundation for improved survival of patients suffering liver damage, particularly from resection of metastatic cancers.

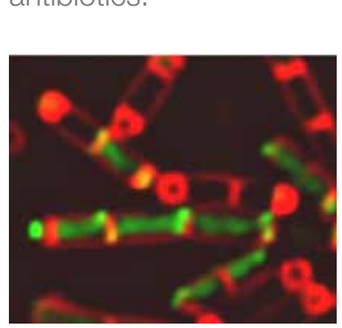
A/Prof Sigal Ben-Yehuda, Associate Professor, Department of Microbiology and Molecular Genetics, Hebrew University of Jerusalem. A/Prof Ben-Yehuda completed her BSc, MSc and doctoral studies at Tel Aviv University and undertook postdoctoral training at Harvard University on a Fulbright Fellowship followed by a Human Frontier Science Program Fellowship. On returning to Israel she joined her current department.

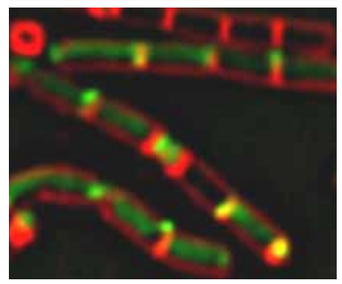
A/Prof Ben-Yehuda has been the recipient of many awards for her work including a **European Research Council Independent Research Starting Grant, The Hebrew University President's Award for excellence in Research, The EMBO Young Investigator Award, The Hebrew University Faculty of Medicine Dean's Matzner Award for excellence in research.**

She has published extensively in prestigious journals, is a presenter at international conferences and is involved in numerous international collaborations.

2011 SIR ZELMAN COWEN UNIVERSITIES FUND PRIZE FOR DISCOVERY IN MEDICAL RESEARCH

Associate Professor Ben-Yehuda was nominated for her contributions to our understanding of the biology of bacteria. Her discoveries are proving fundamental for understanding the mechanisms of the growing problem of bacterial resistance to antibiotics.

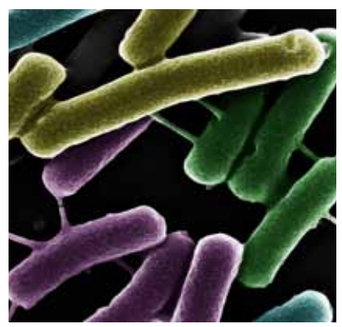




In the early stages of bacteriological research, scientists concentrated on deciphering physical structures that could be seen under the microscope, and only later were biochemistry and molecular biology used to help define the functions of these structures. Among Professor Ben-Yehuda's achievements has been the development of a new approach combining biochemistry and microscopy to characterize the fine elements of bacteria and their cellular role.

In addition, her early work identified a previously unknown mechanism for damage detection as a stimulus for the multiplication and spread of bacteria. This response to damage, called sporulation, is often a tactic used by bacteria to escape the toxicity of antibiotics, and may prove important in attempts to improve the effectiveness of antibiotics.

In recent work, published in **Cell**, Professor Ben Yehuda's laboratory has described a mode of intercellular communication between bacteria based on *nanotubes,* spontaneously forming membranous connections between cells. This discovery could contribute to understanding the problem of antibiotic resistance, as nanotubes can act as conduits for the transfer of antibiotic resistance factors between cells.



COWEN PRIZE

SIR ZELMAN COWEN UNIVERSITIES FUND PRIZE PREVIOUS RECIPIENTS 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.

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

SIR ZELMAN COWEN UNIVERSITIES FUND PRIZE PREVIOUS RECIPIENTS HEBREW UNIVERSITY OF JERUSALEM

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.

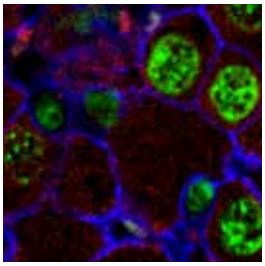
2007 Award

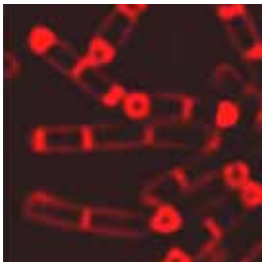
Professor Nir Friedman, School of Engineering and Computer Sciences, Hebrew University of Jerusalem. The award was presented by Mr Michael Dunkel, Fund Trustee and member of the HU Board of Governors at the HU BOG Meeting, Jerusalem, June 2007.

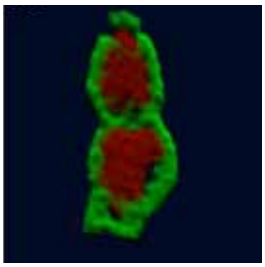
Prof Friedman was the first recipient of the Prize at the Hebrew University.

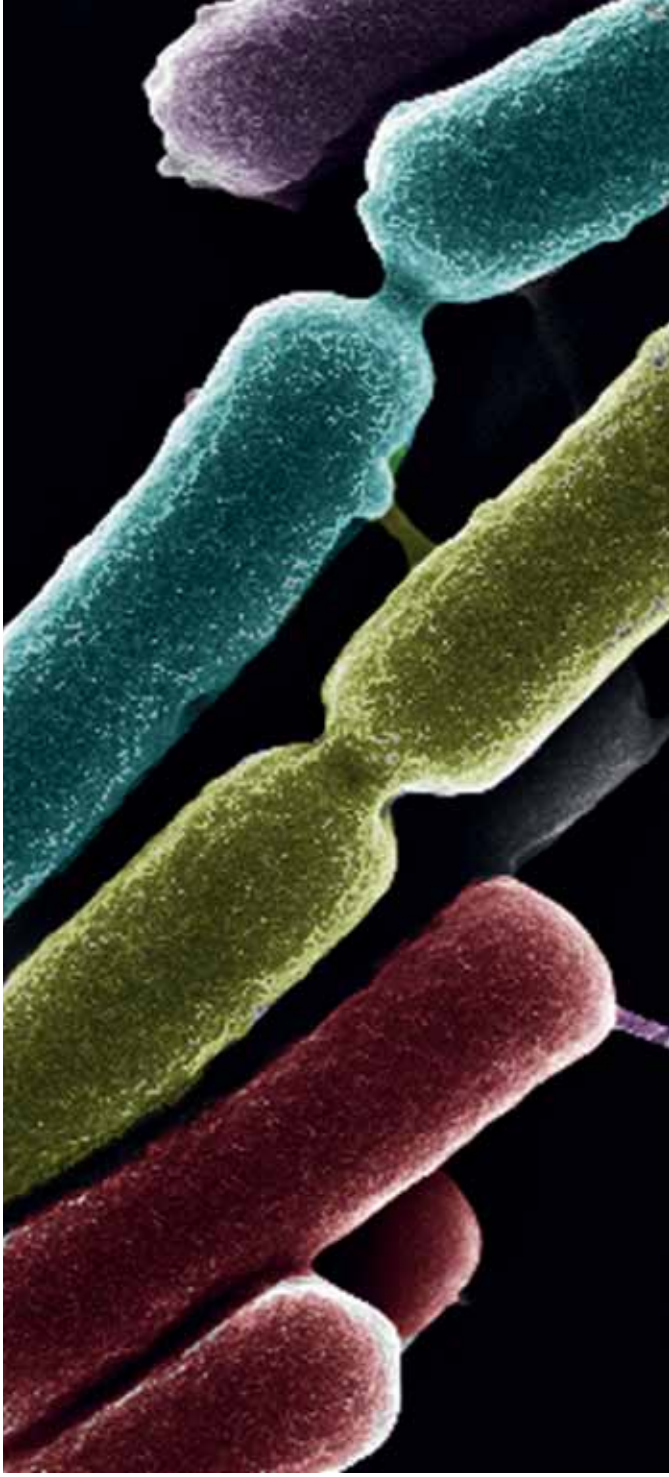
Professor Friedman was nominated for his pioneering work in the field of bioinformatics. He was selected for the award because of the broad application of his work to many fields of medicine.

SIR ZELMAN COWEN UNIVERSITIES FUND
… investing in the future through medical research









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