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The Authority for Research and Development
The Hebrew University of Jerusalem

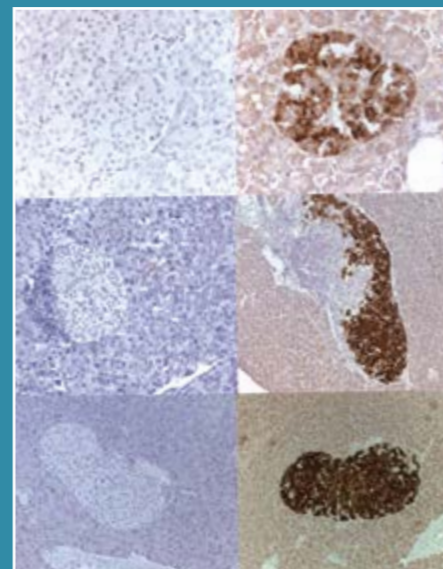
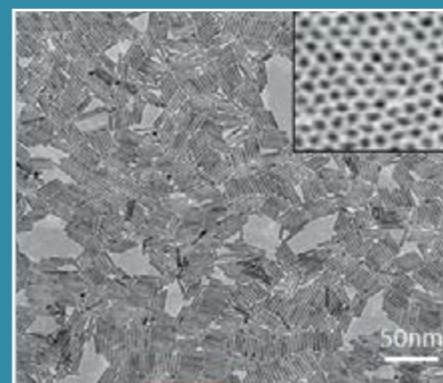
<http://www.facebook.com/JanisDesign>

Project editor: Shoshana Glatzer

Project coordinator: Ayelet Sagiv

THE KAYE INNOVATION AWARDS

AT THE HEBREW UNIVERSITY OF JERUSALEM



תשע"ה 2015

90
years



האוניברסיטה העברית בירושלים
THE HEBREW UNIVERSITY OF JERUSALEM

ISAAC KAYE



Isaac Kaye is a pharmaceutical chemist who has been very successful at translating novel ideas into marketable profit-generating products. He established Norton Healthcare, a substantial generic pharmaceutical company in the UK, which later merged with the IVAX Corporation of the USA. Teva, Israel's biggest company, completed its acquisition of IVAX in 2006, creating the world's largest generics company.

After retiring from IVAX, he turned his attention to venture capital and together with partners founded Israel Healthcare Ventures (IHCV), a provider of capital to early and expansion stage Israeli companies. IHCV focuses exclusively on healthcare and life sciences.

Isaac Kaye's passion for medical innovations that advance human healthcare is matched by a number of other interests, including his love of Israel and its people and his enthusiasm and support for The Hebrew University of Jerusalem and the principles upon which it is based.

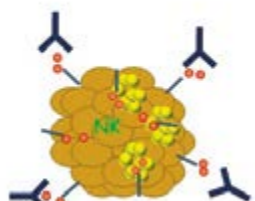
Fortunately for the Hebrew University, Isaac Kaye's interests in pharmacology, therapeutics, and medical devices are very much in line with areas in which the University has considerable expertise and which it is eager to develop.

Isaac Kaye established the annual Kaye Innovation Awards at the Hebrew University in 1993. The awards have earned an esteemed reputation since their inception. Prizes are awarded annually for any innovation that shows potential for bringing profit or savings to the University principally through royalties. Applications must be well focused and accompanied by recommendations, but unlike grant proposals, anyone from the most senior to the most junior staff may apply – in fact students are always encouraged to submit proposals. The winners demonstrate not only good science, but also a focus on commercial viability and the benefits this brings to the University.

In 1995, he established the Isaac and Myrna Kaye Chair in Immunopharmacology at the School of Pharmacy, which provides much needed research funds in this field. In 2005, he also established five annual fellowships for outstanding graduate and post-doctoral students. These fellowships, awarded as "The Kaye-Einstein Fellowships," encourage recipients to continue their studies at the Hebrew University for a minimum of three years, helping to prevent the University's finest scholars from being recruited by other leading academic institutions. Subsequent to the first program of scholarships, five additional three-year scholarships were awarded in 2010, and another five in 2013, to outstanding students as "Kaye Scholarships."

In spite of his demanding and highly successful professional career, Isaac Kaye has always been active on behalf of the Hebrew University. He served as Chairman of the South African Friends organization and became an active member of the University's Board of Governors. Following his move to the UK, Isaac Kaye joined the British Friends and continued as a member of the Board of Governors of the Hebrew University. He is currently Chairman of the British Friends of the Hebrew University. We are deeply indebted to both Isaac Kaye and his wife Myrna for their deep involvement and concern for the University.

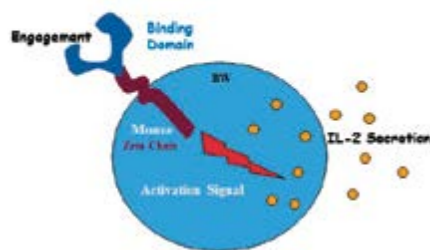
Blocking anti-NKp46 mAb for type I diabetes



1) Blocking anti-TIGIT mAb for cancer treatment



3) Super Fc Identification



Yissum Technology Transfer Company of the Hebrew University



For the past 21 years, Yissum has been taking part in the selection process of Hebrew University faculty and students for the prestigious Kaye Awards. These annual awards are given to those inventors whose work exemplifies best the synergy of scientific excellence and commercial potential.

Yissum enjoys a prominent place among the world's leading technology transfer companies, with over two billion dollars in annual sales of products originating at the Hebrew University and licensed by Yissum sold worldwide. Since its inception in 1964, Yissum has registered over 8,960 patents, covering more than 2500 inventions, 785 of which have been licensed and 96 of these formed the basis for the establishment of start-up companies, 9 of which were formed in 2014. Many of the researchers behind these products and technologies have been acknowledged by receiving the Kaye Award.

This year's first prize is awarded to Prof. Uri Banin of the Faculty of Science, for his invention: "Semiconductor quantum rods - a quantum leap for displays." This is an excellent example of the Hebrew University's cutting-edge scientific leadership that is combined with successful commercialization. In 2009, Yissum started a subsidiary, Qlight Nanotech, which later received substantial investment and business collaboration with global company Merck KGaA. As part of this ongoing partnership, the company opened its new R&D site at the Edmond J. Safra campus in October 2013. Today Qlight's nanocrystals enable light conversion from UV and blue wavelengths to any other wavelength in the visible range. This guarantees high energy efficiency and cost savings for solid state lighting (LED) systems, flat panel displays and various other optical applications.

The second prize this year is awarded to Prof. Ofer Mandelboim of the Faculty of Medicine for his research entitled: "Development of monoclonal antibody against NKp46 for the treatment of Type 1 diabetes mellitus (T1D)." In October 2013, Yissum, together with partners licensed the technology to BiolineRx for the development of BL9020, a novel

antibody for treatment and prevention of Type 1 diabetes. In March 2015, BiolineRx announced positive pre-clinical results and we hope that BL-9020 will eventually be able to improve the quality of life for millions of patients diagnosed with Type 1 diabetes.

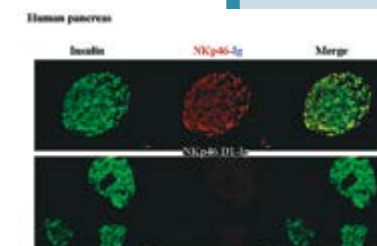
Dr. Zvi Peleg of The Robert H. Smith Faculty of Agriculture, Food and Environment will be receiving the Kaye Award for "Development of new elite sesame cultivars adapted for mechanical harvest with enhanced yield and seed quality." This invention allows the sesame plant capsules to remain closed during maturity. The change will enable mechanical harvesting and will therefore revolutionize the field of sesame, which is currently dominated by manual picking. It will also facilitate crop rotation in industrial countries such as Israel, the US, etc. In December 2014, the invention was successfully licensed by Yissum to Ron Tamir Seeds with the prospect of having commercial seed varieties in a few years' time.

The prize is also awarded to two promising students: Dr. Elad Horwitz for his research on "Methods of predicting efficacy of an anti-VEGFA treatment for solid tumors," and Ms. Geula Hanin for her research on "Down regulating miRNA-132 for the treatment of lipid related disorders."

Yissum is proud to be actively involved in the successful commercialization of these and many other technologies. Our dedicated team is committed to bridging the ever-existing gap between academia and industry in order to bring the fruits of first-class academic research to society at large, and thus provide much-needed funding to support scientific research at the Hebrew University.

We are, as always, indebted to Mr. Kaye for his generosity and personal commitment to support the Hebrew University's researchers in their constant quest for innovation, and extend our sincere congratulations to this year's eminent prize-winners.

YAACOV MICHLIN
President & CEO

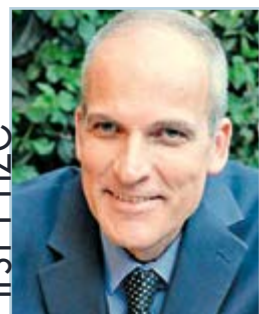


HEBREW
UNIVERSITY
YISSUM



Kaye Winners 2015 - Researchers

First Prize



Prof. **URI BANIN**
 Institute of Chemistry and the Harvey M. Krueger Family Center for
 Nanoscience and Nanotechnology, Faculty of Science
 Semiconductor Quantum Rods - A Quantum Leap for Displays

Second Prize



Prof. **OFER MANDELBOIM**
 Department of Immunology and Cancer Research
 Institute for Medical Research Israel-Canada (IMRIC)
 Faculty of Medicine
 Development of Monoclonal Antibody against NKp46 for the Treatment of
 Type 1 Diabetes Mellitus (T1D)

Third Prize



Dr. **ZVI PELEG**
 Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture
 Robert H. Smith Faculty of Agriculture, Food and Environment
 Development of New Elite Sesame Cultivars Adapted for Mechanical
 Harvest with Enhanced Yield and Seed Quality

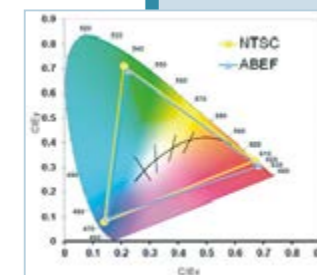


Kaye Winners 2015 - Students

First Prize



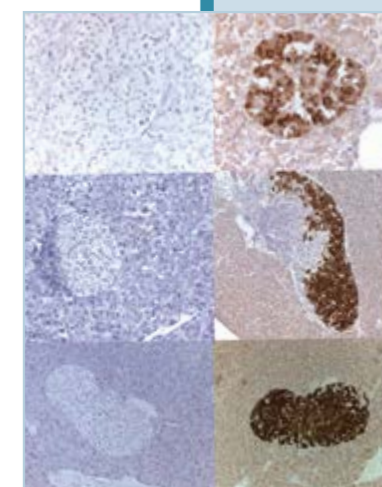
Dr. **ELAD HOROWITZ**
 Department of Immunology and Cancer Research
 Institute for Medical Research Israel-Canada (IMRIC)
 Faculty of Medicine
 Methods of Predicting Efficacy of an Anti-VEGFA
 Treatment for Solid Tumors



Second Prize



Ms. **GEULA HANIN**
 Department of Biological Chemistry
 Silberman Institute of Life Sciences
 Faculty of Science
 Downregulating miRNA-132 for the Treatment of Lipid
 Related Disorders





Prof. Uri Banin
Institute of Chemistry and the Harvey M. Krueger Family Center for Nanoscience and Nanotechnology
Faculty of Science

Uri Banin holds the Alfred & Erica Larisch Memorial Chair at the Institute of Chemistry. He was the founding director of the Hebrew University's Center for Nanoscience and Nanotechnology (2001-2010), served as a member of the board of Yissum, and on the scientific advisory board of Nanosys, Inc., and is an Associate Editor of Nano Letters. Banin's research focuses on nanoscience and nanotechnology of nanocrystals. He has authored over 150 scientific publications in this field that have been extensively cited. Some highlights of Banin's research on nanocrystals include the development of nanocrystals with bright emission in the near-infrared and their incorporation in light emitting diodes (Science 2002), and the synthesis of semiconductor colloidal quantum rods with polarized emission (Nature Materials 2003). In 2004, Banin reported on the selective growth of gold tips onto semiconductor nanocrystals (Science 2004, Nature Materials 2005) opening a field of study of hybrid nanoparticles combining disparate materials. He received an ERC advanced investigator grant to research hybrid nanocrystal systems (2010-2015). Banin and his team discovered a new form of hybrid nanocages (Nature Materials 2010), developed heavily doped semiconductor nanocrystals (Science 2011), and synthesized nanorod couples (Nature Materials 2014). The nanoparticles have potential for use in diverse field including displays, lighting, biology, solar energy, and electro-optics. In 2009, he founded Qlight Nanotech, a start-up company based on his inventions which develops the use of nanocrystals in display and lighting applications.

RESEARCHER

Semiconductor Quantum Rods - A Quantum Leap for Displays

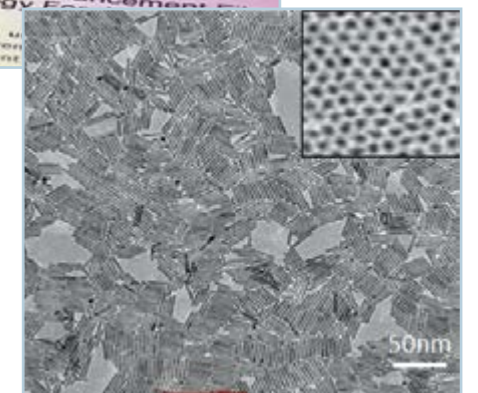
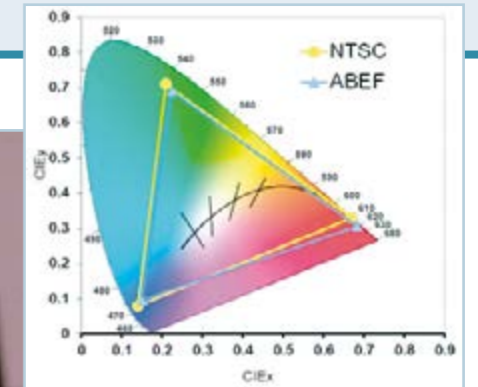
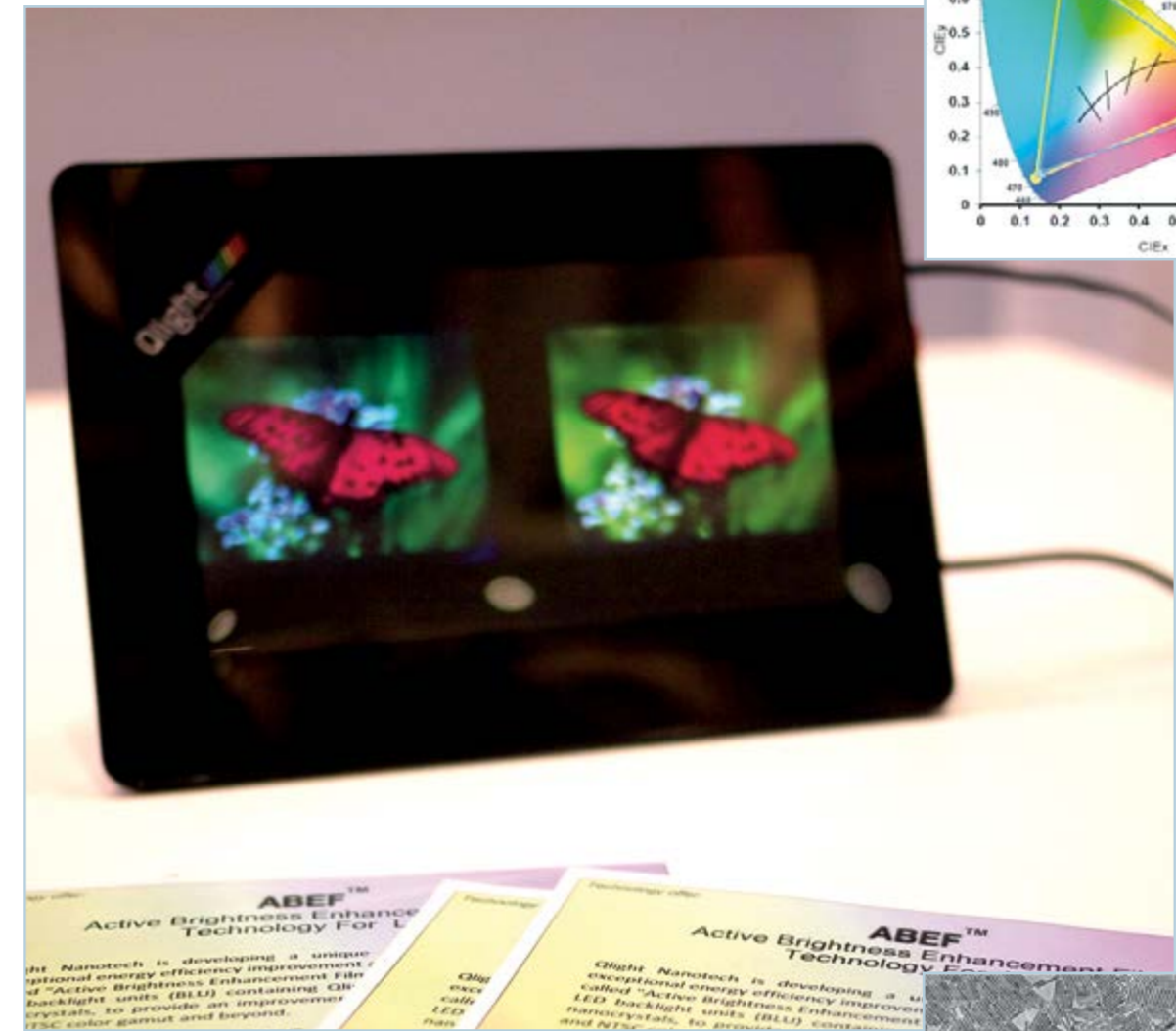
Semiconductor quantum rods offer new functionality of bright color, energy efficiency and switching properties, a unique combination providing high promise for serving as revolutionary materials in next generation flat panel displays. The semiconductor quantum rods (QRs) are cylinder shaped elongated semiconductor nanocrystals, and their emission colors can be controlled by tuning the size, composition and shape, based on quantum confinement effects of nanoscale materials. The emission for such materials can span throughout the whole visible range providing narrow and tunable colors that can provide exceptional

high quality colors for flat panel displays with energy saving characteristics. The unique rods shape also provides polarized emission that is of high relevance to liquid crystal display (LCDs) applications which utilize light polarization in their operation.

To develop the use of semiconductor quantum rods for display applications, Prof. Uri Banin founded Qlight Nanotech in 2009. The start-up company, located in Jerusalem, is based on his inventions, and has 22 employees forming a powerful team of nanotechnology scientists and experts. It has obtained an exclusive license from Yissum to over 10 patent families covering the quantum rods materials, and their various applications in displays. Qlight formed a strategic partnership with Merck, a leading company for innovative high-tech products in healthcare, life science and performance materials and a market leader in display materials. Qlight Nanotech received the Nanotech Startup Company of the year award from the Israel Ministry of Economy's Chief Scientist at the Nano Israel 2014 Conference. Qlight Nanotech products are based on quantum rods technology.

Qlight's first product is the Active Brightness enhancement Film (ABEF). The ABEF is a film with aligned red and green emitting QRs. Pumped by blue LED light in the back light, the ABEF vastly improves the color quality way beyond standard LEDs backlights, delivering a crisp, bright and colorful image along with significant brightness enhancement (Figure 2). The QRs in the film not only give narrow emission and wide color gamut. They are aligned in order to obtain polarized emission from the film which can potentially provide further energy efficiency for the LCD display.

Looking ahead, Qlight is also developing a revolutionary new design for the pixels of flat panel displays, QR display, which can provide large area displays and possibly flexible displays. It is based on the quantum rods providing wide color gamut along with switching directly by modulating the rods emission with electric field. This offers a simplified screen design that will deliver high color quality, high energy efficiency and cost effective manufacturing and has the potential to revolutionize the flat panel display field.

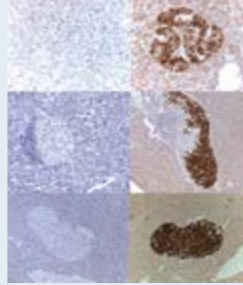




Prof. Ofer Mandelboim

Department of Immunology and Cancer Research and Lautenberg Center
Institute for Medical Research – Israel-Canada (IMRIC)
Faculty of Medicine

Ofer Mandelboim was born in Israel, is married and has three children. His M.Sc. and Ph.D. degrees are from the Weizmann Institute of Science. Ofer did his postdoctoral studies at Harvard University, and since the end of 1999, heads his own laboratory at Hebrew University's Medical School. He was appointed full professor in molecular immunology in 2007, and has published more than 150 papers, H-Index 58 (Google scholar). He has won several awards and prestigious grants, including the Teva Award, and a European Research Council (ERC) advanced grant.



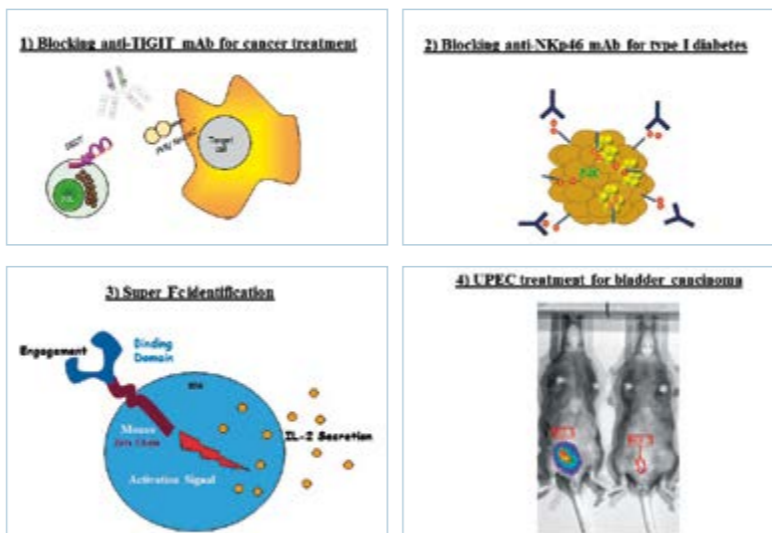
RESEARCHER

Development of Monoclonal Antibody against NKp46 for the Treatment of Type 1 Diabetes Mellitus (T1D)

Research in my lab focuses on Natural Killer (NK) cell biology. NK cells belong to the innate immunity system, although recent evidences suggest that NK cells possess some adaptive properties, mainly a certain type of memory. NK cells kill a variety of hazardous pathogens and cells: including tumors, viruses parasites and bacteria. It is critical to understand how NK cells recognize and eliminate these various enemies and to discover the mechanisms developed by pathogens and tumor cells to escape NK cell attack as this might lead to the development of new medicines for treating these diseases. Because NK cells are efficient killers, their activity has to be tightly controlled. Indeed, the killing of NK cells can be inhibited by a very large family of inhibitory receptors, the second most polymorphic family of receptors in humans. Most inhibitory receptors found on NK cells bind class I MHC proteins that are present almost on all cells of our body; hence, normal healthy cells are protected from NK cell mediated killing. There are however, certain NK inhibitory receptors that do not interact with MHC class I proteins. In 2009, we identified a non-MHC binding NK inhibitory receptor that was named TIGIT. TIGIT is expressed on many different immune cells and is engaged by PVR and nectin2, two proteins highly expressed on many types of tumors. Hence, tumor cells expressing these proteins will be protected from immune cell attack. We developed blocking mAbs against TIGIT and demonstrated recently that practically all tumor infiltrating lymphocytes (TILs) in colon adenocarcinoma and melanomas express TIGIT.

The killing of NK cells is executed by activating NK cell receptors; two of these receptors are CD16 and NKp46. CD16 binds the Fc portion of various mAbs, however, surprisingly, although this receptor was discovered around 40 years ago we still do not know exactly the characteristics determining whether a certain Fc will bind to CD16 efficiently. This is of particular importance because there are several anti-tumor antibodies currently used in the clinic. If we will be able to identify a "super Fc" that will bind efficiently to CD16 we might be able to generate better antibodies (containing super Fc) for improving mAb-mediated cancer cell therapy.

NKp46 is an activating receptor present on NK cells. It is a unique receptor because it is one of few receptors expressed almost uniquely on NK cells. NKp46 recognizes viral hemagglutinins and an unknown cellular ligand expressed by tumors and by the beta cells of the pancreas. We have shown that NKp46 recognizes an unknown ligand expressed on beta cells, that participates in the development of Type I diabetes and that blocking of NKp46 activity affects the development of Type I diabetes. Finally, we have shown recently the NK cells also recognize bacteria directly and that bacteria such as UPEC try to kill the NK cells. When we injected UPEC into the bladder we have a massive accumulation of immune cells including NK and T cells.



Dr. Zvi Peleg

Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture
Robert H. Smith Faculty of Agriculture, Food and Environment

Zvi Peleg received his B.Sc. in life sciences from Ben-Gurion University and Ph.D. in genetics and physiology of wheat under drought conditions from the Hebrew University. He did his post-doctoral studies in Prof. Eduardo Blumwald's lab at University of California, Davis. In January 2012, Dr. Peleg joined the Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture, at the Hebrew University, as a senior lecturer. His research focuses on understanding and improving crop-plants adaptation to environmental stress.

RESEARCHER

Development of New Elite Sesame Cultivars Adapted for Mechanical Harvest with Enhanced Yield and Seed Quality



Sesame is one of the oldest crops in the world, and has been under cultivation in Asia for over 5,500 years. Sesame has been evaluated as a health food. The seeds of sesame are used for cooking and baking, or crushed for producing high-grade edible oil or oily paste (Tahini) and sweets. Sesame seed contains about 50% oil which is rich in linoleic acid and is very stable against oxidative degradation. The world production of sesame stands at 4.5 million ton and in recent years the demand for sesame seeds is rising due to its nutritional value. In spite of its economic and social importance, sesame is largely a neglected crop regarding which limited research has been conducted so far.

Our new biotechnology development will enable to cope with the main problem of this crop, capsule shattering, and genetically improve the yields and seed quality. We have developed new elite sesame lines that are suitable for mechanical harvest. These lines serve as basis for the reintroducing of sesame as a new summer crop in Israel. The introduction of mechanical harvest will enable modernization of this important crop and its use in intensive agriculture. Furthermore, introducing new summer crop is essential for Israeli agriculture, to improve rotation between crops and prevent the development of weed resistance to herbicides.



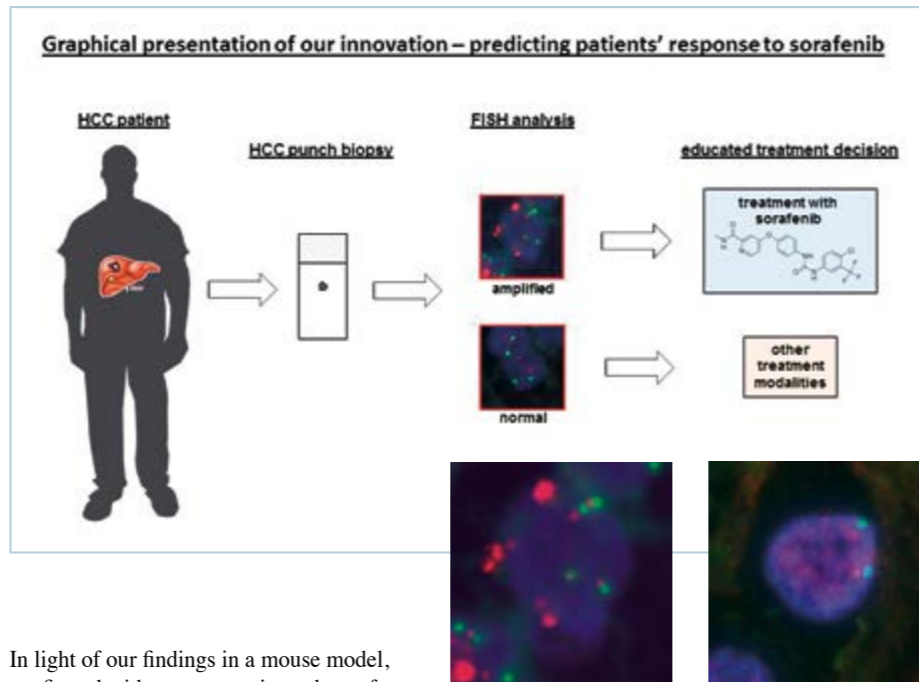


Dr. Elad Horwitz
Department of Immunology and Cancer Research
Institute for Medical Research Israel-Canada
Faculty of Medicine

Early in his studies, Elad Horwitz realized he wanted to pursue cancer research. As a graduate student, he joined the exciting group of Prof. Yinon Ben-Neriah where he was surrounded by elite young scientists who are today his best friends. Completing his dissertation, he postponed postdoctoral training to allow his wife to finish her internship in periodontology. During this period Elad joined a company developing novel treatment modalities for cancer. Recently, he returned to the academy to pursue his research aspirations and hopes to embark soon on postdoc studies abroad.

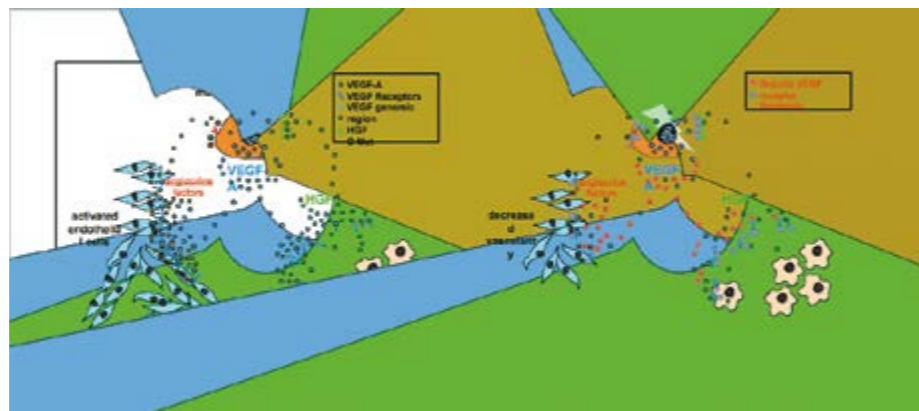
STUDENT

Methods of Predicting Efficacy of an Anti-VEGFA Treatment for Solid Tumors



In light of our findings in a mouse model, confirmed with a retrospective cohort of 187 human HCC patients, we claim that patients with VEGF-A gene amplifications or polysomy (high and low) are better responders to sorafenib and likely to any of the VEGF-A inhibiting drugs. Moreover, our retrospective cohort data suggest that sorafenib treatment may be detrimental in resected patients that do not harbor tumor VEGF-A gains.

Genomic gains in the VEGF-A gene were reported in other tumor types (e.g., lung and colorectal cancers) that are offered different VEGF-A targeting drugs (e.g., Bevacizumab or Sunitinib) therefore, the method we have developed can potentially benefit a wider variety of cancer patients undergoing different treatments.



Hepatocellular carcinoma (HCC) is the third leading cause of cancer death worldwide with a five year survival rate of less than 5%. The only approved drug treatment for unresectable HCC (the majority of cases) is the multikinase inhibitor sorafenib. However, the modest clinical response and the severe toxic side effects accompanying this drug render a true need of biomarkers for patient stratification prior to treatment.

Based on our studies in mice and patient samples, we suggest a simple and applicable method for the pre-treatment identification of cancer patients that are highly likely to hold a good clinical response to sorafenib and probably to the variety of other VEGF-A inhibiting drugs. Our method is applied through fluorescent in situ hybridization (FISH) that will be performed on tumor tissue samples using two fluorescent probes, one identifying the VEGF-A gene locus and one identifying the pericentromeric region of the human chromosome 6 (on which the gene for VEGF-A is encoded). This type of analysis identifies either genomic amplifications (a specific increase in the gene locus copies) or high and low copy gains (an increase in the entire chromosome number, i.e., polysomy).

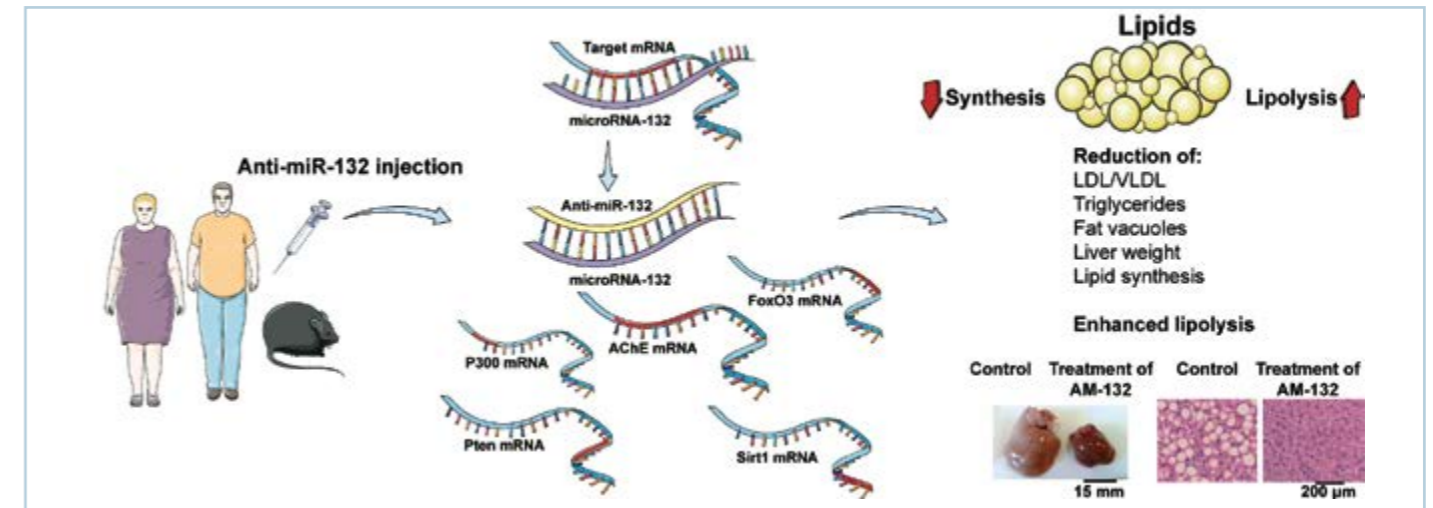


Ms. Geula Hanin
Department of Biological Chemistry, Silberman Institute of Life Sciences
Faculty of Science
Supervisor: Prof. Hermona Soreq

Geula Hanin was born in Moscow and grew up in Jerusalem. Her research focuses on microRNA suppressors of the enzyme Acetylcholinesterase (AChE). First, she identified potential microRNAs that target AChE (Hanin and Soreq, *Frontiers of Molecular Neuroscience* 2011). Focusing on the AChE targeting primate-specific microRNA-608, she demonstrated that impaired AChE-microRNA-608 interaction associates with hypertension, inflammation and anxiety (Hanin et al., *Human Molecular Genetics* 2014). Combining transgenic engineering with oligonucleotide treatment strategy, she recently discovered that microRNA-132, which also targets AChE, controls the link between stress and metabolic function, which is susceptible to therapeutic oligonucleotide treatment.

STUDENT

Down Regulating miRNA-132 for the Treatment of Lipid Related Disorders



Over a third of the world's population suffers from hyperlipidemia. This involves increased lipid accumulation in the blood and organs that results in elevated risk of life-threatening systemic complications, including diabetes, stroke and cardiac disease. However, the underlying molecular mechanisms are insufficiently understood and available therapeutic options are limited. Here, we report that microRNA (miRNA)-132 operates as a reversible metabolic amplifier of hyperlipidemia. MiRNAs are small 22-25 nucleotides long non-coding RNAs involved in all aspects of development and cell fate determination. They are particularly suitable for controlling the rapidly adjustable physiology of entire signaling systems by co-repressing numerous target transcripts rapidly and effectively and are amenable for therapeutic manipulations. We have previously identified miRNA-132 as an acetylcholinesterase-targeted, stress-inducible regulator of brain-body signaling by acetylcholine.

Given that cholinesterase mutations associate with hyperlipidemia, and that stroke and cardiac diseases involve reduced plasma acetylcholinesterase levels, we explored the potential role of peripheral miRNA-132 in hyperlipidemia. First, we engineered conditional transgenic mice with miR-132 over-expression in body tissues alone. Inducing miR-132 excess by doxycycline treatment exacerbated systemic and hepatic lipid accumulation in treated mice, which presented massively elevated body weight, liver triglycerides, plasma LDL/VLDL and metabolic transcripts; accompanied by simultaneous suppression of numerous miRNA-132 targets including acetylcholinesterase. To test the susceptibility of this phenotype to potential therapeutic interference, we further established a model of non-transgenic fattened mice. Those mice presented elevated hepatic levels of miRNA-132, increased liver weight, accumulation of hepatic lipid vacuoles and other biomarkers of hyperlipidemia and modified brain miRNA

profiles in the metabolism-controlling hypothalamus. Importantly, intravenous injection of the fattened mice with 10 mg/Kg of chemically protected Anti-miRNA-132 antisense oligonucleotides lead to healthy lipid characteristics within one week, while retrieving normal levels of multiple miRNA-132 targets and reducing liver weight and triglycerides, plasma LDL/VLDL and fat vacuoles. That the hyperlipidemic phenotype may both be induced by peripheral miRNA-132 over-expression and suppressed by systemic antisense oligonucleotide treatment suggests causality and reversibility of peripheral miRNA-132-mediated changes in hyperlipidemia and identifies miRNA-132 as a promising target for therapeutic intervention with and reduction of the accompanying health risks of hyperlipidemia and obesity-associated metabolic diseases.

KAYE-EINSTEIN SCHOLARSHIPS

ROI ASOR
Institute of Chemistry, Ph.D. Candidate
Faculty of Science

REUT AVINUN
Psychology, Ph.D. Candidate
Faculty of Social Sciences

REBECCA BITON
Institute of Archaeology, Ph.D. Candidate
Faculty of Humanities

DAPHNA GROSS-MANOS
Paul Baerwald School of Social Work and Social Welfare, Ph.D. Candidate

ALISA KOMSKY-ELBAZ
Department of Animal Sciences, Ph.D. Candidate
Robert H. Smith Faculty of Agriculture, Food and Environment

2013-2015

KAYE WINNERS

Previous Prize Winners
Kaye Innovation Awards
at the Hebrew University
of Jerusalem

Kaye Winners 2014

- Inventor:** Prof. **SIMON BENITA** & Dr. **TAHER NASSAR**
Institute for Drug Research (IDR)
School of Pharmacy, Faculty of Medicine
- Invention:** Development of an Original Nano-Delivery Platform for Markedly Improving the Oral Absorption of Poorly Absorbed Drugs and Proteins
- Inventor:** Prof. **SHLOMO MAGDASSI**
Casali Center for Applied Chemistry
Institute of Chemistry, Faculty of Science
- Invention:** Transparent Conductive Coffee Rings for Touch Screens
- Inventor:** Prof. **MICHAL BANIYASH**
Department of Immunology and Cancer Research
Institute for Medical Research - Israel-Canada
Hebrew University-Hadassah Medical School
- Invention:** Novel Prognostic/Diagnostic Biomarkers for Detecting the Immune Status of Patients Suffering from Diseases Characterized by Chronic Inflammation and Associated Immunosuppression
- Inventor:** **MICHAEL BRANDWEIN**
Biofilm Research Laboratory
Institute of Dental Sciences
Faculty of Dental Medicine
- Invention:** Novel AntiBiofilm/Antibacterial Polymer for Food Packaging
- Inventor:** **YOTAM BAR-ON**
Department of Immunology and Cancer Research
Institute for Medical Research - Israel-Canada
Hebrew University-Hadassah Medical School
- Invention:** Development of Novel Antibodies for the Treatment of Influenza Infections

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Kaye Winners 2013

- Inventor: Prof. **ILAN SELA**
Robert H. Smith Institute for Plant Sciences and Genetics
Robert H. Smith Faculty of Agriculture, Food and Environment
Invention: Silencing of Bee-Affecting Viral Genes in order to Control CCD
- Inventor: Prof. **AVI DOMB**
Institute for Drug Research (IDR)
School of Pharmacy, Faculty of Medicine
Invention: Maze Water Purification System
- Inventor: Prof. **RAYMOND KAEMPFER**
Department of Biochemistry and Molecular Biology
Institute for Medical Research Israel-Canada (IMRIC)
Hebrew University-Hadassah Medical School, Faculty of Medicine
Invention: Reduction of Inflammatory Disease Symptoms with Short Peptides that Inhibit Signaling through CD28
- Inventor: **URI BEN-DAVID**
Department of Genetics
Silberman Institute of Life Sciences
Faculty of Science
Invention: PluriSIns – Pluripotent Specific Inhibitors
- Inventor: **MARGANIT COHEN-AVRAHAMI**
Institute of Chemistry
Faculty of Science
Invention: Transdermal Delivery Vehicles for NSAIDs: The Combination of Liquid Crystals with Cell-Penetrating Peptides
- Inventor: **NOA KAYNAN**
Department of Immunology and Cancer Research
Institute for Medical Research Israel-Canada (IMRIC)
Hebrew University-Hadassah Medical School, Faculty of Medicine
Invention: Generation of 'Super' Fc Antibody for Improving Medical Treatments

Kaye Winners 2012

- Inventor: Prof. **RAPHAEL (RAFFI) GOREN**
The Robert H. Smith Faculty of Agriculture, Food and Environment
Invention: The Search for a Novel Water-Soluble Cyclopropene Derivative Antagonist (CPAS) of Ethylene Action in Agricultural Crops
- Inventor: Prof. **SAUL YEDGAR**
Department of Biochemistry and Molecular Biology
Institute for Medical Research Israel-Canada (IMRIC)
Faculty of Medicine
Invention: A Novel Class of Multi-Functional Anti-Inflammatory Drugs (MFAIDs) for the Treatment of Inflammatory/Allergic Diseases
- Inventor: Prof. **HAYA LORBERBOUM-GALSKI**
Department of Biochemistry and Molecular Biology
Institute for Medical Research Israel-Canada (IMRIC)
Faculty of Medicine
Invention: Cell and Organelle-Directed Protein Replacement Therapy for Mitochondrial and other Metabolic Diseases
- Inventor: **LITAL MAGID**
Institute for Drug Research
Faculty of Medicine
Invention: Novel Cannabinoid Receptor Type 2 Selective Agonists for the Treatment of Inflammatory Conditions and Acute Central Nervous System Injury

- Inventor: **IDIT SAGIV-BARFI**
Alexander Silberman Institute of Life Sciences
Faculty of Science
Invention: Novel T Cells Proliferation Inhibitors
- Inventor: **CHAMUTAL GUR, M.D.**
PhD student under the supervision of Prof. Ofer Mandelboim
Lautenberg Center for General and Tumor Immunology
Institute for Medical Research Israel-Canada (IMRIC)
Faculty of Medicine
Invention: Generation of Anti-NKp46 mAb for the Treatment of Type 1 Diabetes

Kaye Winners 2011

- Inventor: Prof. **HAIM D. RABINOWITCH**
Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture
Robert H. Smith Faculty of Agriculture, Food and Environment
Invention: Genetic Innovations in Vegetable Crops: The Cornerstone of Israel's Prominence in Hi-BioTech Seed Industries
- Inventor: Prof. **DAN GAZIT**
Skeletal Biotech Laboratory
Faculty of Dental Medicine
Invention: Novel Technologies for Adult Stem Cell Manipulation and Applications in Tissue Engineering and Regenerative Medicine
- Inventor: Dr. **RAANAN FATTAL**
Benin School of Computer Science and Engineering, Faculty of Science
Invention: Second-Generation Wavelet-Based Image Enhancement
- Inventor: Ms. **KATY MARGULIS-GOSHEN**
Casali Institute of Applied Chemistry, Faculty of Science
Invention: Formation of Organic Nanoparticles from Microemulsions: Enhancing Water Solubility for Improved Biological Performance in Pharmaceuticals, Agriculture and Cosmetics
- Inventor: Mr. **YFTHAH TAL-GAN**
Institute of Chemistry, Faculty of Science
Invention: Development of New Peptide-Based Inhibitors of Protein Kinase B (PKB) as Potential Drugs for Cancer
- Inventor: Ms. **ADA GRIN**
Institute for Drug Research
Faculty of Medicine
Invention: Tissue Regeneration Membrane

Kaye Winners 2010

- Inventor: Prof. **NISSIM BENVENISTY**
Silberman Institute of Life Sciences, Faculty of Science
- Invention: Technologies to Enable Directed Differentiation of Human Embryonic Stem Cells
- Inventor: Prof. **ODED SHOSEYOV**
The Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture
The Robert H. Smith Faculty of Agriculture, Food and Environment
- Invention: Molecular Farming of Human Recombinant Collagen in Transgenic Tobacco Plants
- Inventor: Prof. **SHMUEL PELEG**
Benin School of Computer Science and Engineering, Faculty of Science
- Invention: Video Synopsis: Summarizing and Indexing Surveillance Video
- Inventor: Prof. **ALEXANDER VAINSTEIN**
The Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture
The Robert H. Smith Faculty of Agriculture, Food and Environment
- Invention: Towards Tailor-Made Crops and Compounds
- Inventor: Ms. **MICHAL ISAACSON**
PhD student of Dr. Noam Shoval, Department of Geography, Faculty of Social Sciences
- Invention: A Novel System for Tracking and Analyzing Human Spatial Behavior by Monitoring People's Mobility for Tourism, Town Planning and Healthcare Applications.
- Inventor: Mr. **AVIAD HAI**
PhD student of Prof. Micha Spira Department of Neurobiology Alexander Silberman Institute of Life Sciences
Faculty of Science
- Invention: In-cell Recordings and Stimulation: A Fundamental Breakthrough Concept and Technology for Neuroprosthetics
- Inventors: Mr. **EZEQUIEL WEXSELBLATT**
PhD Supervisor: Prof. Jehoshua Katzhendler Institute for Drug Research, School of Pharmacy, Faculty of Medicine
Mr. **ROEE VIDAUSKI**
PhD Supervisor: Prof. Gad Glaser Department of Developmental Biology and Cancer Research
Institute for Medical Research Israel-Canada (IMRIC), Faculty of Medicine
- Invention: Compounds for Treating Bacterial Infections
- Inventor: Mr. **MICHAEL GROUCHKO**
PhD student of Prof. Shlomo Magdassi Casali Institute of Applied Chemistry, Institute of Chemistry
Faculty of Science
- Invention: Air Stable Copper Nanoparticles: Conductive Inks for Printed Electronics

Kaye Winners 2009

- Inventor: Prof. **ABRAHAM HOCHBERG**
Department of Biological Chemistry, Faculty of Science
- Invention: From a Noncoding Oncofetal RNA to Cancer Therapy: Personalizing Medicine with H19
- Inventor: Prof. **SHLOMO SASSON**
Department of Pharmacology & Experimental Therapeutics, School of Pharmacy
- Invention: Novel D-Xylose Derivatives: A New Class of Antihyperglycemic Compounds
- Inventor: Prof. **DAPHNE ATLAS**
Department of Biological Chemistry, Faculty of Science
- Invention: Development of Small Molecules for the Treatment of Neurodegenerative Diseases
- Inventor: Prof. **ARIEH GERTLER**
Institute of Biochemistry, Food Science and Nutrition,
Robert H. Smith Faculty of Agriculture, Food and Environment
- Invention: Development of Leptin Antagonists and their Potential Use as Therapeutic Modalities
- Inventor: Mr. **SHAY SELA**
PhD student of Prof. Eli Keshet, Institute for Medical Research Israel-Canada, Faculty of Medicine
- Invention: The Identification of a Novel Prognostic and Diagnostic Marker of Preeclampsia

- Inventor: Mr. **DIMA LIBSTER**
PhD student of Prof. Nissim Garti and Prof. Gil Shoham,
Casali Institute of Applied Chemistry, Faculty of Science
- Invention: Lyotropic Hexagonal Liquid Crystals as Carriers of Therapeutic Peptides for Transdermal Administration: Solubilization and Structural Characterization
- Inventor: Mr. **SHAUL LAPIDOT**
PhD student of Prof. Oded Shoseyov, Smith Institute for Plant Sciences and Genetics in Agriculture
Robert H. Smith Faculty of Agriculture, Food & Environment
- Invention: Compositions Comprising Fibrous Polypeptides and Polysaccharides
- Inventor: Ms. **NETA PESSAH**
PhD student of Prof. Meir Bialer and Prof. Boris Yagen, School of Pharmacy
- Invention: α -Fluoro and α -Chloro 2,2,3,3 -Tetramethylcyclopropylcarboxamide: Two Novel Chemical Entities for the Treatment of Epilepsy and Other Disorders

Kaye Winners 2008

- Inventor: Prof. **DANIEL COHN**
Casali Institute of Applied Chemistry, Institute of Chemistry, Faculty of Science
- Invention: Tailor-made Biodegradable Polymers for the Prevention of Post-surgical Adhesions
- Inventor: Prof. **HERMONA SOREQ**
Department of Biological Chemistry, Silberman Institute of Life Sciences, Faculty of Science
- Invention: Engineered Human Cholinesterases and RNA-Targeted Agents to Suppress Their Functioning
- Inventors: Dr. **ARIE DAGAN** and Prof. **SHIMON GATT**
Department of Biochemistry, Faculty of Medicine
- Invention: Development of Novel Anti-cancer Drugs
- Inventor: Mr. **YANIV SEMEL**
PhD student under the supervision of Prof. Dani Zamir
The Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture
Faculty of Agricultural, Food and Environmental Quality Sciences
- Invention: Phenom Networks: A Web-based System for the Analysis of Quantitative Phenotypes on Both Plants and Animals for Breeding and Research
- Inventor: Mr. **NADAV KIMELMAN-BLEICH**
PhD and DMD student under the supervision of Prof. Dan Gazit
Skeletal Biotechnology Laboratory, Faculty of Dental Medicine
- Invention: Scaffolds with Oxygen Carriers and Their Use in Tissue Engineering
- Inventor: Mr. **DIMA SHEYNI**
PhD student of Prof. Dan Gazit, Skeletal Biotechnology Laboratory, Faculty of Dental Medicine
- Invention: Ultrasound-based Non-viral Gene Delivery Induces Bone Formation In Vivo
- Inventor: Mr. **MATAN RAPOPORT**
PhD student under the supervision of Prof. Haya Lorberboum-Galski
Department of Cellular Biochemistry and Human Genetics, Faculty of Medicine
- Invention: Enzyme Replacement Therapy for Mitochondrial Disorders: Lipoamide Dehydrogenase Deficiency as a Proof-of-principle

Kaye Winners 2007

- Inventor: Prof. **DANI ZAMIR**
Smith Institute of Plant Sciences and Genetics in Agriculture
Faculty of Agricultural, Food and Environmental Quality Sciences
- Invention: Improving Plant Breeding Using Exotic Genetic Libraries
- Inventors: Prof. **MEIR BIALER** and Prof. **BORIS YAGEN**
Departments of Pharmaceutics, and Medicinal Chemistry and Natural Products
School of Pharmacy, Faculty of Medicine
- Invention: Design and Development of Valnoctamide: A New Drug with Stereoselective CNS Activities
- Inventor: Prof. **LEO JOSKOWICZ**
School of Engineering and Computer Science, Faculty of Science
- Invention: An Image-guided System with a Miniature Robot for Precise Positioning and Targeting in Keyhole Neurosurgery
- Inventor: Mr. **YANIV LINDE**
Student of Prof. Chaim Gilon, Department of Organic Chemistry, Faculty of Science
- Invention: A Novel Oral Anti-obesity Drug Candidate: Reduction of Food Consumption by Melanocortin-4 Peptide Agonist
- Inventor: Mr. **EREZ PODOLY**
Student of Prof. Hermona Soreq, Department of Biological Chemistry, Faculty of Science
- Invention: A Natural Brain Protein Protection from Alzheimer's Disease
- Inventor: Mr. **MORAN FARHI**
Student of Prof. Alexander Vainstein and Dr. Hagai Abeliovich
Smith Institute of Plant Sciences and Genetics in Agriculture
Faculty of Agricultural, Food and Environmental Quality Sciences
- Invention: Engineering *Saccharomyces cerevisiae* for the Production of Methylbenzoate and Resistance to Benzoic Acide for Uses in the Food Industry
- Inventor: Mr. **YUVAL AVNIR**
Student of Prof. Yechezkel Barenholz, Department of Biochemistry, Faculty of Medicine
- Invention: Liposomal Glucocorticoids for Treating Inflammatory States

Kaye Winners 2006

- Inventor: Dr. **YONATAN ELKIND**
Smith Institute of Plant Sciences and Genetics in Agriculture
Faculty of Agricultural, Food and Environmental Quality Sciences
- Invention: Breeding of Pepper Varieties Adapted for Protected Cultivation under Mild Winter Conditions
- Inventor: Prof. **ELKA TOUITOU**
Department of Pharmaceutics, School of Pharmacy, Faculty of Medicine
- Invention: Ethosome Innovative Technology
- Inventor: Prof. **MOSHE KOTLER**
Department of Pathology, Faculty of Medicine
- Invention: A Prophylactic Vaccine Preventing a Mortal Viral Disease of Koi Fish and Carps
- Inventors: Prof. **MEIR BIALER** and Prof. **BORIS YAGEN**
Departments of Pharmaceutics, and Medicinal Chemistry and Natural Products, School of Pharmacy,
Faculty of Medicine
- Invention: Design and Development of a New Drug with Enantioselective CNS Activities – Propylisopropyl Acetamide (PID)
- Inventor: Ms. **ELENA KHAZANOV**
Student of Prof. Yechezkel Barenholz, Department of Biochemistry, Faculty of Medicine
- Invention: Tumorsuppressive Therapy by Liposome Containing both Doxorubicin and Ceramide
- Inventor: Mr. **YEHOSHUA MAOR**
Student of Prof. Raphael Mechoulam, Department of Medicinal Chemistry and Natural Products,
School of Pharmacy, Faculty of Medicine
- Invention: Novel Anti-hypertensive Agents based on Cannabis Constituent with Anti-inflammatory Properties-synergistic Beneficial Cardiovascular Effects

- Inventor: Mr. **NIR QVIT**
Student of Prof. Chaim Gilon, Department of Organic Chemistry, Faculty of Science
- Invention: SIB: Small Integrated Building Blocks
- Inventor: Ms. **KHULOUD TAKROURI**
Student of Prof. Morris Srebnik
- Invention: Department of Medicinal Chemistry and Natural Products, School of Pharmacy, Faculty of Medicine
Synthesis and Anti-microbial Activity of a Novel Series of Alkyldimethylamine Cyanoboranes and their Derivatives

Kaye Winners 2005

- Inventors: Prof. **SHLOMO MAGDASSI** and Dr. **YELENA VINETSKY**
Casali Institute of Applied Chemistry, Faculty of Science
- Invention: Ceramic Ink Jets for Digital Printing on Glass
- Inventor: Dr. **ZEHAVA UNI**
Department of Animal Sciences, Faculty of Agricultural, Food and Environmental Quality Sciences
- Invention: Enhancement of Development of Oviparous Species by In Ovo Feeding – Feeding Eggs with Natural Nutrient Supplements before They Hatch to Produce More Robust Chicks
- Inventor: Prof. **SIMON BENITA**
Department of Pharmaceutics, School of Pharmacy, Faculty of Medicine
- Invention: Cationic Emulsions for Ophthalmic Drug Delivery
- Inventor: Prof. **URI BANIN**
Department of Physical Chemistry and Center for Nanoscience and Nanotechnology, Faculty of Science
- Invention: Semiconductor Nanocrystals for Optical, Electronic, Imaging and Biological Applications
- Inventor: Mr. **TALEB MOKARI**
Student of Prof. Uri Banin
- Invention: Department of Physical Chemistry and Center for Nanoscience and Nanotechnology, Faculty of Science
Semiconductor Nanocrystals with Conductive Zone
- Inventor: Mr. **ADEL JABBOUR**
Student of Prof. Doron Steinberg and Prof. Morris Srebnik
- Invention: Department of Medicinal Chemistry and Natural Products, School of Pharmacy and Institute of Dental Sciences,
Faculty of Dental Medicine
Interfering in Bacterial Cross-talk: A Novel Means to Influence Pathogenicity of Biofilms
- Inventor: Ms. **NATALYA KOGAN**
Student of Prof. Raphael Mechoulam, Department of Medicinal Chemistry and Natural Products,
School of Pharmacy, Faculty of Medicine
- Invention: Cancer Drug – Use of Quinonoid Derivatives of Cannabinoids and Such Novel Compounds in the Treatment of Malignancies
- Inventor: Mr. **RANI POLAK**
Student of Prof. Eran Goldin and Dr. Eitan Israeli, Faculty of Medicine
- Invention: GourMed – Cooking school that will develop recipes and run a course for people with dietary limitations due to chronic diseases
- Inventors: Staff of Prof. **MICHA WEISS**
Department of Computerized Information Systems, Computerized Student Registration Project Team
- Invention: Computerized Student Course Registration Project Team“Smart Raffle”

Kaye Winners 2004

- Inventor: Prof. **AMNON SHASHUA**
School of Engineering and Computer Science, Faculty of Science
- Invention: Monocular Visual Processing for On-board Driving Assistance
- Inventors: Prof. **ITAMAR WILLNER**, Dr. **EUGENII KATZ**,
Dr. **FERNANDO PATOLSKY** and Mr. **YOSSI WEIZMANN**
Institute of Chemistry, Faculty of Science
- Invention: Optoelectronic Detection of Telomerase in Cancer Cells: Development of a Screening Test for Urinary Bladder in Urine Samples
- Inventors: Prof. **MICHAEL FRIEDMAN** and Prof. **AMNON HOFFMAN**
Department of Pharmaceutics, School of Pharmacy, Faculty of Medicine
Dr. **ERAN LAVY**
Koret School of Veterinary Medicine, Faculty of Agricultural, Food and Environmental Quality Sciences
- Invention: Novel Gastro-retentive Dosage Form (GRDF) – A Means for Sustained Administration of Drugs with Narrow Absorption Window at the Upper Gastrointestinal Tract
- Inventors: Mr. **AVIRAM SPERNATH** and Ms. **IDIT YULI-AMAR**
Students of Prof. Nissim Garti, Casali Institute of Applied Chemistry, Faculty of Science
- Invention: New Nanosized Vehicles for Triggering and Targeting of Phytochemicals
- Inventor: Ms. **AVITAL TORRES-KERNER**
Student of Prof. Morris Srebnik, Department of Medicinal Chemistry and Natural Products, School of Pharmacy
- Invention: New Natural Sunscreens: UVR Absorbing Compounds from Lichens and Cyanobacteria
- Inventor: Dr. **HIJAZI ABU ALI**
Student of Prof. Morris Srebnik, Department of Medicinal Chemistry and Natural Products, School of Pharmacy,
Faculty of Medicine
- Invention: Novel Organoboron Compounds – Synthesis and Biological Activity
- Inventor: Mr. **TAREQ JUBETH**
Student of Prof. Abraham Rubinstein and Prof. Yechezkel Barenholz, Departments of Pharmaceutics
and Biochemistry, Faculty of Medicine
- Invention: Targeting the Intestinal Mucosa by Charged Liposomes
- Inventor: Mr. **OMRI BEN-ZION**
Student of Prof. Amos Nussinovitch
Institute of Biochemistry, Food Science and Nutrition
Faculty of Agricultural, Food and Environmental Quality Sciences
- Invention: Novel Method and Apparatus for Testing the Rolling Tack of Pressure-sensitive Adhesive Methods

Kaye Winners 2003

- Inventors: Prof. **NISSIM GARTI** and Dr. **ABRAHAM ASERIN**
Casali Institute of Applied Chemistry, Faculty of Science
- Invention: Nano-sized Self-assembled Structured Liquids
- Inventor: Dr. **ABDULLAH HAJ-YEHIA**
Department of Pharmaceutics, School of Pharmacy, Faculty of Medicine
- Invention: Design, Synthesis and Biological Activity of Novel Hybrid Drugs
- Inventor: Dr. **JONATHAN MIRVIS**
Melton Centre for Jewish Education, School of Education
- Invention: Florence Melton Adult Mini-School: A Social Franchise Model
- Inventor: Ms. **DRORA BALAGA**
Smith Institute of Plant Sciences and Genetics in Agriculture,
Faculty of Agricultural, Food and Environmental Quality Sciences
- Invention: "TOMATO" Computerized System, Breeding Hybrid Varieties
- Inventor: ENG. **TOM KOEVARY**
Casali Institute of Applied Chemistry, Faculty of Science
- Invention: The Centre for Process Development: A Platform for Thousands of "Inventors to Order" for Industry
- Inventor: Prof. **ZICHRIA ZAKAY-RONES**
Institute of Microbiology, Faculty of Medicine
- Invention: Anti-cancer Therapy by Newcastle Disease Virus (NDV)
- Inventor: Mr. **ARIE GRUZMAN**
Student of Prof. Shlomo Sasson, Department of Pharmacology and Experimental Therapeutics, School of Pharmacy,
Faculty of Medicine
- Invention: Novel Anti-hyperglycemic Drugs
- Inventor: Ms. **AVIVA JOSEPH**
Student of Prof. Eli Kedar and Prof. Yechezkel Barenholz, The Lautenberg Center for Immunology
and Department of Biochemistry, Faculty of Medicine
- Invention: INFLUSOME-VAC, 3 Novel, Highly Efficient Influenza Vaccines
- Inventor: Mr. **HADI ASLAN**
Student of Prof. Dan Gazit, Skeletal Biotechnology Laboratory, Faculty of Dental Medicine
- Invention: Novel Methods for Stem Cells Based Therapy
- Inventor: Mr. **SHAI SHALEV-SHWARTZ**
Student of Prof. Yoram Singer, School of Engineering and Computer Science, Faculty of Science
- Invention: A Query Melody System
- Inventor: Mr. **MICKEY KOSLOFF**
Student of Prof. Zvi Selinger, Silberman Institute of Life Sciences, Faculty of Science
- Invention: Drug-assisted Catalysis, Novel Cancer Therapeutics
- Inventor: Mr. **ABED AL-AZIZ QUNTAR**
Student of Prof. Morris Srebnik, Department of Medicinal Chemistry and Natural Products, School of Pharmacy,
Faculty of Medicine
- Invention: The Synthesis of Novel Di- and Tri-Vinylphosphonates

Kaye Winners 2002

- Inventor: Prof. **SHMUEL BEN-SASSON**
Department of Experimental Medicine and Cancer Research, Faculty of Medicine
- Invention: Kin-Ace Technology – A Broad Platform Technology for Disease Control via the Interception of Intracellular Signaling
- Inventors: Prof. **MICHAEL SELA** and Dr. **DORON STEINBERG**
Department of Oral Biology, Faculty of Dental Medicine
Prof. **MICHAEL FRIEDMAN**
School of Pharmacy, Faculty of Medicine
Prof. **W. AUBREY SOSKOLNE**
Department of Periodontics, Faculty of Dental Medicine
- Invention: Periochip-sustained Release Treatment for Periodontal Diseases
- Inventor: Prof. **GERSHON GOLOMB**
Department of Pharmaceutics, School of Pharmacy, Faculty of Medicine
- Invention: Nanoparticulate Drug Delivery Systems for Restenosis Therapy
- Inventor: Prof. **SHMUEL PELEG**
School of Engineering and Computer Science, Faculty of Science
- Invention: OMNISTEREO: Capturing and Viewing 3D Stereoscopic Panoramic Images
- Inventor: Dr. **SHLOMO YITZCHAIK**
Department of Inorganic and Analytical Chemistry, Faculty of Science
- Invention: Molecular Layer Epitaxy (MLE)
- Inventor: Dr. **WILLIAM (BILL) BREUER**
Department of Biological Chemistry, Faculty of Science
- Invention: A Test for the Detection of Toxic Forms of Iron in Human Plasma
- Inventor: Dr. **ITSHAK GOLAN**
The Lautenberg Center for Immunology, Faculty of Medicine
- Invention: Novel CD44 Variant: Potential Target in the Therapy of Rheumatoid Arthritis
- Inventor: Mr. **EYTAN KLAUSNER**
Department of Pharmaceutics, School of Pharmacy, Faculty of Medicine
- Invention: Novel Gastroretentive Dosage Forms
- Inventor: Ms. **NINA ISOHERRAREN**
Department of Pharmaceutics, School of Pharmacy, Faculty of Medicine
- Invention: New Anti-epileptic Drug
- Inventor: Mr. **ALEXEI SHIR**
Department of Biological Chemistry, Faculty of Science
- Invention: Targeted dsRNA Brain Cancer Therapy
- Inventor: Mr. **FERNANDO PATOLSKY**
Institute of Chemistry, Faculty of Science
- Invention: Creating Multi-stress Resistance in Arabidopsis
- Inventor: Mr. **ALEXANDER MAZEL**
Department of Plant Sciences, Faculty of Science
- Invention: Creating Multi-stress Resistance in Arabidopsis Plants
- Inventor: Ms. **LITAL ALFONTA**
Institute of Chemistry, Faculty of Science
- Invention: An Electronic Sensor to Identify Drug Resistance in HIV Patients
- Inventor: Mr. **YOSSI GAFNI**
Skeletal Biotechnology Laboratory, Faculty of Dental Medicine
- Invention: Vascular Tissue Engineering
- Inventor: Dr. **GADI PELLED**
Skeletal Biotechnology Laboratory, Faculty of Dental Medicine
- Invention: Engineering of Complex Hybrid Tissues

Kaye Winners 2001

- Inventor: Prof. **EDUARDO MITRANI**
Silberman Institute of Life Sciences, Faculty of Science
- Invention: Micro-organ Technology for Genetically Engineered Bio-pumps
- Inventor: Prof. **SIMON BENITA**
Department of Pharmaceutics, School of Pharmacy, Faculty of Medicine
- Invention: Drug Delivery through Positively Charged Submicron Emulsions
- Inventors: Mr. **DANNY VINITSKY** and Mr. **EITAN RAZ**
Department of Computerized Information Systems
Mr. **YEHAVI BOURVINE**
Computation Center
- Invention: Short Message Service (SMS) Supplied by All Cellphone Operators Sending Short Text Messages to Students' Phones
- Inventor: Dr. **ANDREW SHIPWAY**
Institute of Chemistry, Faculty of Science
- Invention: Novel Technology for the Generation of Electronic Circuits Using a Novel Computer-assisted Printing Method
- Inventors: Prof. **YONA CHEN**, Prof. **YITZHAK HADAR** and Mr. **AMIR TOAR**
Department of Soil and Water Sciences, Faculty of Agricultural, Food and Environmental Quality Sciences
- Invention: "RollCom" – A Novel, Simple and Easy to Operate Composting Apparatus
- Inventor: Prof. **ITAMAR GATI**
Department of Psychology, Faculty of Social Sciences, and School of Education
- Invention: "Future Directions" Internet Site to Facilitate Career Decision Making
- Inventor: Ms. **MIRIAM V. KOTT-GUTKOWSKI**
Silberman Institute of Life Sciences, Faculty of Science
- Invention: MDRTL Ex-Vivo Kit Measure and Select Effective Multi-drug Resistance Blocker
- Inventor: Ms. **SUSANNA TCHILIBON**
School of Pharmacy, Faculty of Medicine
- Invention: HU-320 Anti-inflammatory Drug
- Inventor: Mr. **YEHUDA GIL**
The Center for Multimedia-Assisted Instruction
- Invention: The Mobile Smart Table-MST Combining Various Multimedia Accessories

Kaye Winners 2000

- Inventor: Prof. **MARTA WEINSTOCK-ROSIN**
Department of Pharmacology, School of Pharmacy, Faculty of Medicine
- Invention: Development of Exelon: A Drug for the Treatment of Alzheimer's Disease (AD)
- Inventor: Prof. **MEIR BIALER**
Department of Pharmaceutics, School of Pharmacy, Faculty of Medicine
- Invention: Valproyl Glycinamide (TV 1901): A New Anti-epileptic (AED) and CNS Drug for the Treatment of Migrane, Neuropathic Pain and Mania
- Inventors: Prof. **AVNER ADIN** and Dr. **NICOLAI VESCAN**
Assistants: Ms. **RIVKA KALBO** and Ms. **LUBA RUBINSTEIN**
Division of Environmental Sciences, School of Applied Science, Faculty of Science
- Invention: "Electro-Flocculation" for Water Treatment and Reuse
- Inventor: Dr. **BARUCH SCHWARZ**
School of Education
- Invention: The "Kishurim Project"

- Inventor: Mr. **ITAI PELES**
Computer Authority, Ein Kerem
- Invention: IBTS-Internet Based Testing System to Replace Traditional Questionnaires and Written Tests
- Inventor: Mr. **REUVAN AMAR**
Computer Authority, Mount Scopus
- Invention: HUDAP-Hebrew University Data Analysis Package
- Inventor: Mr. **MEIR GLICK**
Department of Medicinal Chemistry, School of Pharmacy, Faculty of Medicine
- Invention: Novel Stochastic Algorithm for Use in Life Sciences, Physics, Telecommunications and Economics
- Inventor: Mr. **GIL RONEN**
Department of Genetics, Silberman Institute of Life Sciences, Faculty of Science
- Invention: Novel Plant Gene "B" and Methods to Genetically Manipulate Color Formulation in Plants
- Inventor: Mr. **NIR SITVANI**
Department of Animal Sciences, Faculty of Agricultural, Food and Environmental Quality Sciences
- Invention: Antelope-like Stimulating Device to Reduce Stress of Wild Animals in Captivity

Kaye Winners 1999

- Inventor: Dr. **ODED SHOSEYOV**
Department of Plant Pathology and Microbiology,
Faculty of Agricultural, Food and Environmental Quality Sciences
- Invention: CBD Technology – Using the CBD Protein to Bind Various Molecules to Cellulose
- Inventor: Prof. **ELISHA TEL-OR**
Department of Agricultural Botany and Otto Warburg Center for Biotechnology in Agriculture
Faculty of Agricultural, Food and Environmental Quality Sciences
- Invention: Azolla Biofilter for Waste Treatment
- Inventor: Prof. **HERMONA SOREQ**
Department of Biological Chemistry, Faculty of Science
- Invention: Antisense Technology – To Treat Various Neurodegenerative Syndromes
- Inventors: Mr. **YARON BEN-ETZION**
Head of Manpower and Payroll
Ms. **CHAVA SPRUCH**
Head of Payroll System, Department for Computerized Information Systems
- Invention: A Solution for BUG 2000
- Inventor: Mr. **LEON MARGOLIN**
Department of Anatomy and Cell Biology, Faculty of Medicine
- Invention: A Mask for the Treatment of Headaches
- Inventor: Mr. **GADI TURGEMAN**
Bone Gene Therapy and Molecular Pathology Laboratory, Faculty of Dental Medicine
- Invention: The Reciprocal Differentiation System, Controlling the Level of BMP2 Expression

Kaye Winners 1998

- Inventor: Prof. **ITAMAR WILLNER**
Institute of Chemistry, Faculty of Science
- Invention: Layered Electrically-Contacted Enzyme-Electrodes and Antigen/Antibody Assembles for Electrochemical and Piezoelectrical Biosensors and Immunosensor Devices
- Inventors: Prof. **NISSIM GARTI**
Casali Institute of Applied Chemistry, Faculty of Science
Dr. **YURI FELDMAN**
Department of Applied Physics, Faculty of Science
- Invention: Time Domain Dielectric Spectrometer (TDDS) for Investigation of Advanced Materials and Medical Systems
- Inventors: Prof. **MICHAEL SCHIEBER**, Dr. **JACOB NISSENBAUM**, Dr. **LEONID MELKHOV** and Ms. **ASAF ZUCK**
School of Applied Science, Faculty of Science
- Invention: Polycrystalline Hg 12 X-Ray Detector Plates for Digital Radiology
- Inventors: Prof. **DAVID AVNIR**
Institute of Chemistry, Faculty of Science
Prof. **SERGEI BRAUN**
Silberman Institute of Life Sciences, Faculty of Science
Prof. **OVADIA LEV**
Division of Environmental Sciences, Faculty of Science
Prof. **MICHAEL OTTOLENGHI**
Institute of Chemistry, Faculty of Science
- Invention: Reactive Organic Sol-gel Ceramic Materials
- Inventor: Prof. **JOSEPH HIRSCHBERG**
Silberman Institute of Life Sciences, Faculty of Science
- Invention: Genetic Engineering of Astaxanthin Production in Transgenic Plants
- Inventor: Mr. **AMIR ZUKER**
Kennedy-Leigh Centre for Horticultural Research, Faculty of Agricultural, Food and Environmental Quality Sciences
- Invention: Transgenic Carnation Plants with Novel Characteristics
- Inventor: Mr. **GALEN MARQUIS**
Institute of Jewish Studies, Faculty of Humanities
- Invention: Production of the Hebrew University of Jerusalem Bible Project
- Inventor: Mr. **JEHUDA BASNIZKI**
Silberman Institute of Life Sciences, Faculty of Science
- Invention: Novel Seed-planted Hybrid Varieties of the Globe Artichoke
- Inventor: Mr. **ALEXEY KAMYSHNY**
Casali Institute of Applied Chemistry, Faculty of Science
- Invention: Form III Aspartame

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Kaye Winners 1997

- Inventors: Prof. **YECHZKEL BARENHOLZ** and **DR. RIVKA COHEN**
 Department of Biochemistry, Faculty of Medicine
 Prof. **ALBERTO GABIZON** and Dr. **DORIT GOREN**
 Hadassah University Hospital
 Invention: DOXIL – Liposomal Doxorubicin for Cancer Treatment
- Inventor: Prof. **DAPHNE ATLAS**
 Department of Biological Chemistry, Faculty of Science
 Invention: A New Anti-Parkinson's Drug
- Inventors: Prof. **NAVA BEN-ZVI**
 Center for Multimedia Assisted Instruction
 Mr. **DAVID RASHTY**
 Computation Center
 Mr. **ELI KANAI**
 Snunit Educational Information System, Faculty of Science
 Invention: Snunit Educational Information System
- Inventor: Mr. **YOAV SMITH**
 Faculty of Medicine
 Invention: The Dermal Imaging System
- Inventor: Ms. **VARDA HERSHKO**
 Institute of Biochemistry, Food Science and Nutrition, Faculty of Agriculture
 Invention: Hydrocolloid Coatings for Food and Agricultural Products
- Inventor: Mr. **SHMARYAHU EZRAHI**
 Casali Institute of Applied Chemistry, Faculty of Science
 Invention: Fire-resistant Hydraulic Fluids

Kaye Winners 1996

- Inventor: Prof. **SHABTAY DIKSTEIN**
 School of Pharmacy, Faculty of Medicine
 Invention: Development of Topically-applied Drugs for the International Market
- Inventor: Prof. **ABRAHAM SZTEJNBERG**
 Department of Plant Pathology and Microbiology, Faculty of Agriculture
 Invention: AQ10: A Novel Biofungicide for the Control of Plant Diseases
- Inventor: Prof. **DAN DAVIDOV** and Dr. **MICHAEL GOLOSOVSKY**
 Racah Institute of Physics, Faculty of Science
 Invention: High-resolution Millimeter-wave Scanning Microscope
- Inventor: Prof. **CHAIM GILON**
 Institute of Chemistry, Faculty of Science
 Invention: Backbone Cyclization and Cycloscan TM: Novel Technologies for the Fast Discovery of New Peptide Based Drugs
- Inventor: Mr. **MICHAEL HOICHMAN**
 Computer Programmer, Faculty of Medicine
 Invention: The "Maestro" Program for Controlling Auditory Experiments
- Inventor: Mr. **BARAK HERSHKOVITZ**
 Faculty of Medicine
 Invention: "Biochem Thinker": A New Computer Program to be used by Biochemistry Students as a Tutorial Tool

Kaye Winners 1995

- Inventor: Prof. **ITAI BAB**
 Bone Laboratory, Faculty of Dental Medicine
 Invention: Osteogenic Growth Peptide (OGP)
- Inventor: Prof. **NISSIM GARTI**
 Casali Institute of Applied Chemistry, Faculty of Science
 Invention: New Emulsifiers
- Inventor: Prof. **YECHZKEL BARENHOLZ**
 Department of Biochemistry, Faculty of Medicine
 Invention: A Novel Approach to Obtain Efficient and Stable Remote Drug Loading of Liposomes for Clinical Use
- Inventors: Dr. **EUGENII KATZ**, Ms. **AZALIA RIKLIN** and Ms. **RON BLONDER**
 Institute of Chemistry, Faculty of Science
 Invention: Development of Biosensor and Immunosensor Devices

Kaye Winners 1994

- Inventors: Dr. **B. SCHWARZBURD** and Dr. **MARCELLO CHAFFER**
 Department of Animal Sciences, Faculty of Agriculture
 Invention: Membrane Vesicles of E. coli as a Potent Non-toxic Vaccine Against Colibacillosis in Poultry
- Inventor: Mr. **DUDU RASHTY**
 Computation Center, Faculty of Science
 Invention: Hebrew University Information Retrieval System
- Inventors: Prof. **HAIM RABINOWITZ** and Prof. **NACHUM KEDAR**
 Department of Field and Vegetable Crops, Faculty of Agriculture
 Invention: Development of Long Shelf-life Tomatoes