



THE HEBREW UNIVERSITY OF JERUSALEM  
BOARD OF GOVERNORS 2025

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# THE KAYE INNOVATION AWARDS



DREAMING. CREATING. INNOVATING.  
Since 1925





## ISAAC KAYE

**Isaac Kaye is a pharmaceutical chemist who has been very successful at translating novel ideas into 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, new chemical entities and medical devices are very much in line with areas in which the University has considerable expertise and which it is eager to develop.

In 1995, the Isaac and Myrna Kaye Chair in Immunopharmacology at the School of Pharmacy was established, providing much needed research funds in this field. In 2005, Kaye established five annual fellowships for outstanding graduate and post-doctoral students. "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 institutions. Subsequent to the first program of scholarships, five additional three year scholarships were awarded in 2010, and another five in 2013. Yet another five commenced in 2016.

Isaac Kaye established the annual Kaye Innovation Awards in 1993. The awards have earned an esteemed reputation highlighting innovations with potential for income generation, principally through royalties for the University. 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.

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.

Isaac Kaye has always been active on behalf of The Hebrew University. He has 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. He is currently Chairman of the British Friends.

Our University is deeply indebted to both Isaac and Myrna for their deep involvement and devotion to this institution.



# PIONEERING THE FUTURE:

## Honoring the Innovators Shaping Science, Technology, and Medicine

Hebrew University is marking a historic milestone this year — 100 years of groundbreaking research, academic excellence, and global impact. As we reflect on a century of achievements, it is clear that innovation remains at the heart of our institution. Over the past year and a half, despite significant challenges in the Middle East, our researchers have continued to push boundaries, refusing to give in to negative forces. As Martin Buber, a renowned philosopher and one of the university's first professors who contributed to shaping the university's academic vision once said, "The world is not comprehensible, but it is embraceable: through the embracing of one of its beings." This idea reflects the essence of scientific discovery—while we may never fully understand the complexities of the universe, we make progress by focusing on specific challenges and working toward solutions. This philosophy is what drives our researchers to engage deeply to solve pressing global issues.

For nearly three decades, the Kaye Innovation Awards ceremony has recognized outstanding breakthroughs with significant commercial potential—transforming academic research into real-world solutions. Established by visionary entrepreneur Isaac Kaye, the award honors Hebrew University scientists whose work makes a tangible impact, reinforcing the vital connection between academia, industry, and commercial success. The Kaye family's enduring partnership with the university continues to support this mission, and this year's recipients exemplify that vision, pushing the boundaries of medicine, technology, and scientific discovery.

### Prof. Yinon Ben-Neriah: Revolutionizing Cancer Treatment

For years, cancer research has been shaped by the pursuit of targeted therapies—treatments that can attack cancer cells while sparing healthy tissue. Few have made as profound an impact in this area as Prof. Yinon Ben-Neriah. His pioneering work in oncology led to the discovery of kinase inhibitors, a game-changing class of cancer drugs that continue to be at the forefront of treatment today.

Now, he has done it again. His latest breakthrough—a new class of anti-leukemia drugs—is showing unprecedented results in clinical trials. By targeting specific components in the Wnt signaling pathway, these small-molecule inhibitors are proving remarkably effective against several tumor types. One of these compounds, A51, has already advanced to Phase II clinical trials for acute myeloid leukemia (AML) and solid tumors. The potential impact? A transformational shift in cancer treatment, offering new hope for patients worldwide.

### Prof. Nadav Katz: One Small Step for a Scientist, One Giant Leap for Israel's Quantum Future

The world is on the brink of a quantum computing revolution, and Prof. Nadav Katz is helping to lead Israel into this new frontier. As CTO of Qhipu Quantum LTD, he has played a central role in designing and developing Israel's first-ever 20-qubit superconducting quantum processor (QPU). This achievement positions Hebrew University—and Israel as a whole—as a major player in the future of quantum technology.

Unlike traditional computers, which process information in binary (ones and zeros), quantum computers leverage qubits to perform calculations at unprecedented speeds. The applications of this technology are immense—ranging from drug discovery to artificial intelligence to cryptography. With Prof. Katz at the helm, Israel is staking its claim in a race that is set to define the future of computing.

### Prof. Yossi Buganim: The Future of Regenerative Medicine

The ability to reprogram cells—turning one type of cell into another—has been a dream of regenerative medicine for decades. Prof. Yossi Buganim has not only made this a reality but has also surpassed the limitations of traditional stem cell techniques. While Nobel laureate Shinya Yamanaka's discovery of induced pluripotent stem cells (iPSCs) transformed the field, these cells come with major risks—chief among them, a high potential for tumors.

Prof. Buganim's lab has developed a new, safer approach, using non-Yamanaka factors to convert fibroblasts into placental stem cells (TSCs). This discovery is poised to revolutionize regenerative medicine and could have profound applications in anti-aging therapies, regenerative treatments, and even the future of organ growth for transplantation. His technology has already been commercialized through Ananda Labs, a startup dedicated to bringing these innovations to market.

### Dr. Omer Deutsch: Transforming Diagnostics with Saliva-Based Testing

Sometimes, the simplest ideas have the power to change the world. That is precisely what Dr. Omer Deutsch, a former PhD student within the Lab of Prof. Aharon Palmon at The Institute of Biomedical

and Oral Research, Hebrew University, has done. His breakthrough in saliva-based diagnostics is making medical testing faster, easier, and more accessible than ever before.

By developing a method to selectively remove alpha-amylase from saliva samples, Dr. Deutsch dramatically improved the accuracy and reliability of rapid diagnostic tests. This innovation, patented by Yissum, has already been commercialized into a CE- and UKCA-approved product, now available in major UK retail chains like Boots. What started as a Ph.D. project has now become a global healthcare solution—a shining example of how academic research can translate into real-world impact.

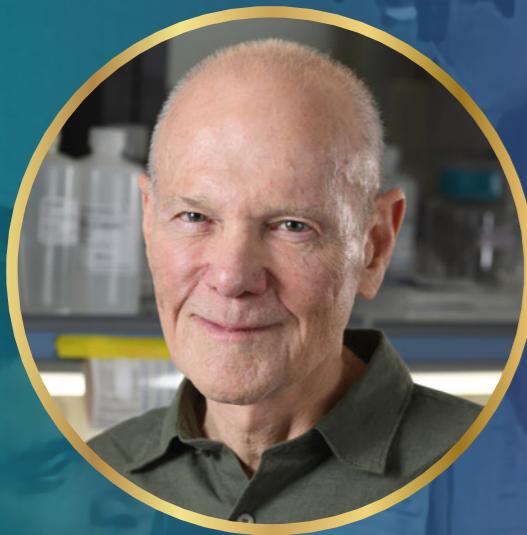
At Yissum, we take immense pride in being the driving force behind these groundbreaking discoveries—helping Hebrew University researchers turn their ideas into commercial success stories that benefit society. The Kaye Awards remind us each year that the brightest minds, with the right support and collaboration, can make an enormous impact on the world.

We extend our deepest gratitude to the Kaye family, whose unwavering commitment to innovation continues to inspire and empower our research community. Congratulations to this year's winners—your achievements not only shape the future but also inspire fellow researchers to pursue bold ideas and change the world.



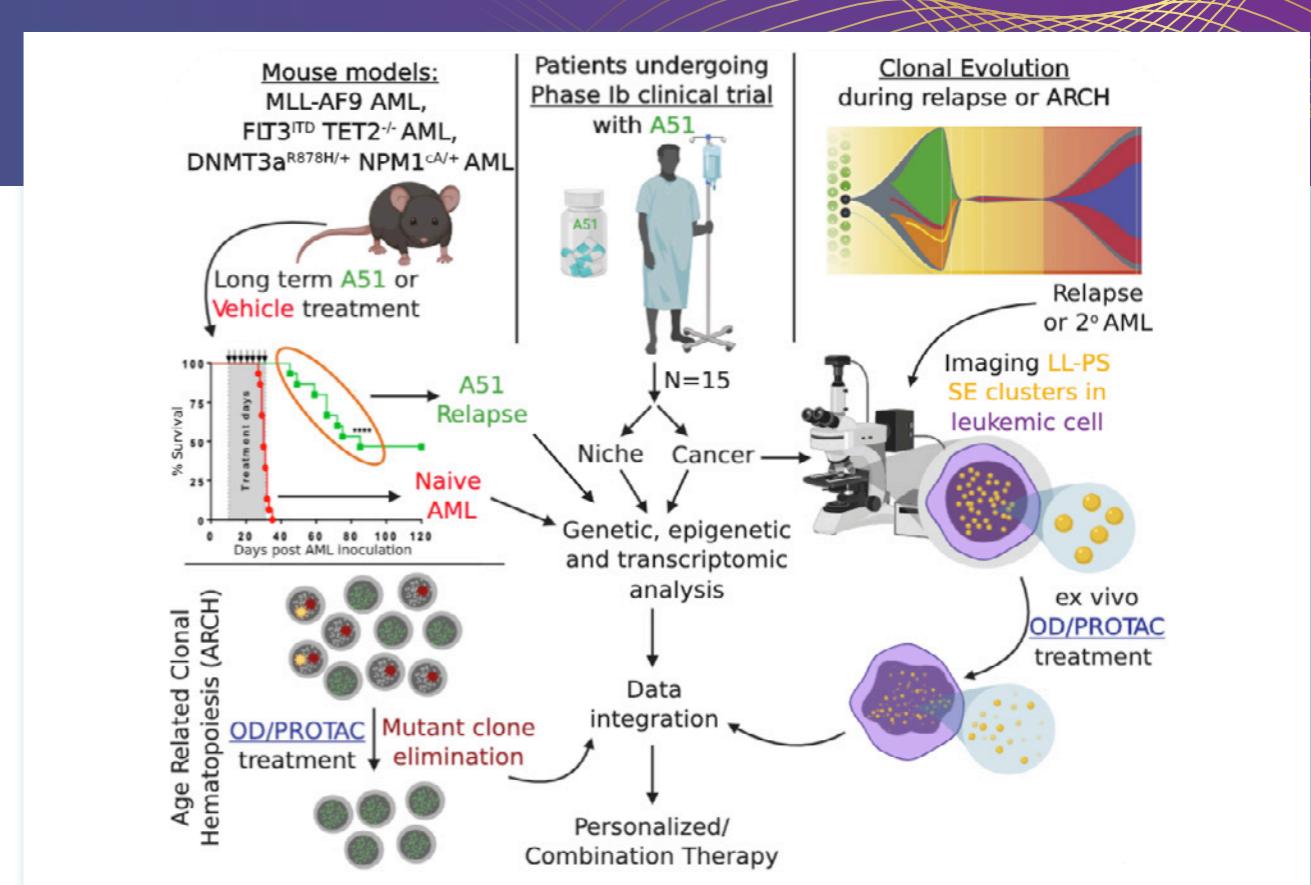
**Alon Natanson**  
CEO, Yissum

# RESEARCHER PRIZE



## PROF. YINON BEN-NERIAH

Prof. Yinon Ben-Neriah is a professor of immunology and cancer research at the Hebrew University of Jerusalem. Yinon is an EMBO member, elected fellow of the European Academy of Cancer Sciences and recipient of various Israeli prizes for biomedical research—Landau, Teva Founders, Rappaport, EMET and the Israel Prize for Medical Research. Yinon studies cancer development and therapy. His main achievements include determination of the structure of the CML oncprotein Bcr-Abl and developing a prototype targeted cancer therapy for its inhibition; deciphering key components in the NF- $\kappa$ B and Wnt signaling pathway with major impact in cancer; identifying NF- $\kappa$ B as the first molecular link between inflammation and cancer; elucidating mechanisms for WNT and mutant p53 activation and developing a new class of small molecule kinase inhibitors with profound therapeutic effects in preclinical and early clinical studies in several cancer types.



## RESEARCH DESCRIPTION

Acute myeloid leukemia (AML) is one of the most aggressive, yet also one of the most interesting types of cancer. It is still considered a disease with unmet therapy needs and the 5-year survival rate of patients is only 20%. Following an intensive research and development effort our research team succeeded in developing a biological drug, curing up to 50% of model mice of poor risk human leukemia and eradicating human leukemia cells transplanted to model mice. Leukemia cells produce many proteins which are barely made in normal blood cells, working in concert to provide the leukemic cell growth and chemotherapy protection. Unlike most modern cancer drugs, our newly developed drug works like a cluster bomb that attacks simultaneously many leukemic proteins, making it difficult for the leukemia cell to evade the therapy. Based on our preclinical studies at the Lautenberg Center, our drug A51 received FDA approval and successfully completed a Phase I clinical trial at three major cancer centers in the US. A significant proportion of AML patients, who have a particular, common mutation and were resistant to multiple

previous treatments benefited from treatment with our drug, some showing complete response, although with a short duration. Based on these clinical results, we have already started a Phase 2 combination trial of A51 with several drugs used in the clinic to treat AML, which by themselves don't benefit patients enough, and in addition, clinical trials in two incurable solid cancers are in progress.

Our current aim is to explore therapy options that complement the therapeutic efficacy of A51, both in AML and in solid tumors. We have already identified one promising combination option, based on an epitranscriptomics study, an emerging arena in cancer therapy. We found an RNA methylation inhibitor that enhances significantly the therapeutic effect of A51 in AML preclinical models and plan a clinical trial of A51 with the methylation inhibitor in refractory AML patients.

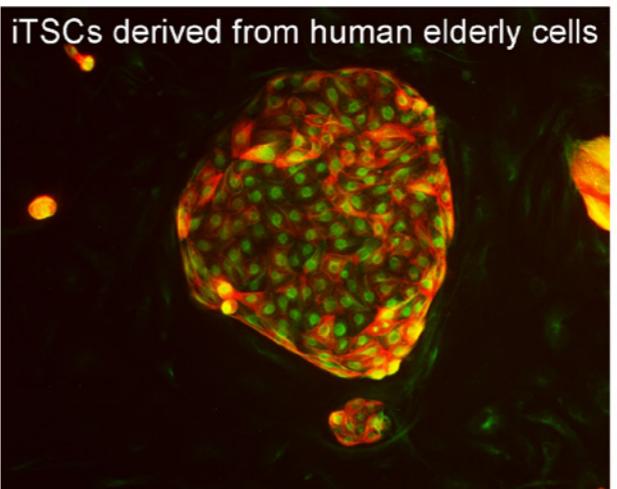
# RESEARCHER PRIZE



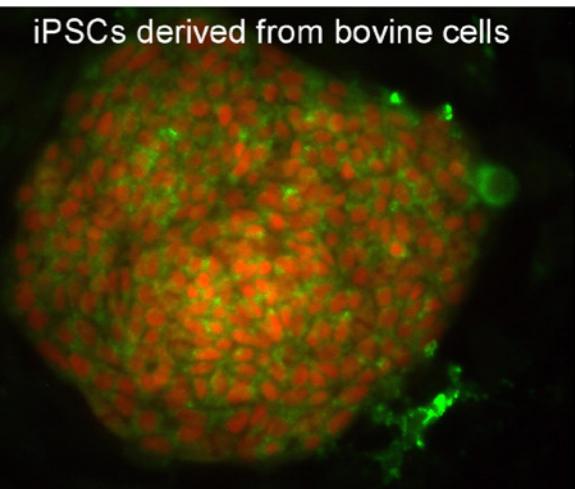
## PROF. YOSSI BUGANIM

**Yossi Buganim** is an HHMI International Research Scholar and Associate Professor at the Faculty of Medicine at the Hebrew University of Jerusalem. He is a leading expert in nuclear reprogramming, pioneering breakthroughs in regenerative medicine and sustainable food technologies. His groundbreaking innovations rejuvenate aging cells to treat age-related diseases and enable the production of non-Yamanaka iPSCs for human therapies and bovine applications in food tech. As CSO and co-founder of Ananda Labs and EternalStem, and a consultant and external contractor for Aleph Farms, he drives innovation across these fields. His contributions have earned him numerous prestigious honors, including awards from HHMI, ERC, EMBO, and the Science magazine "Stem Cell and Regenerative Medicine" award.

### Regenerative medicine



### Food-tech industry



### RESEARCH DESCRIPTION

The groundbreaking discovery by Nobel laureate Shinya Yamanaka, which involves the conversion of adult cells into induced pluripotent stem cells, or iPSCs, has revolutionized both the field of regenerative medicine and the food-tech industry. iPSCs possess all the properties of embryonic stem cells without the ethical concerns associated with sacrificing embryos.

Building upon this technology, numerous companies have emerged aiming to harness its potential for cellular rejuvenation. However, Yamanaka's factors are highly tumorigenic and lead to rapid loss of cell identity. Recognizing these limitations, my lab has spent the past decade developing various novel technologies to convert cells into iPSCs and other stem cell types, using our own developed sets of factors. We are proud to have pioneered the conversion of fibroblasts into placental stem cells, known as trophoblast stem cells (TSCs), making us the first in the world to achieve this milestone. Our patented combination of factors has enabled us to rejuvenate elderly cells and enhance their cellular function to a greater extent than Yamanaka factors, while minimizing the risk of oncogenicity.

Building upon this success, we founded Ananda Labs, dedicated to addressing aging-related diseases using our innovative technologies.

In parallel, I co-founded EternalStem, a company dedicated to long-term storage and the production of cost-effective, safe, and high-quality iPSCs using non-Yamanaka factors for regenerative medicine.

Our work has also garnered significant interest from the food-tech industry, with companies like Aleph Farms seeking our assistance in producing iPSCs from bovine cells. After three years of collaboration, we have successfully achieved this goal, with a patent currently being drafted by Yissum and Aleph Farms.

Across all these endeavors, I hold shares, serve as CSO, or have licensing agreements in place. Collectively, these projects have already brought significant revenue to the Hebrew University and Yissum.

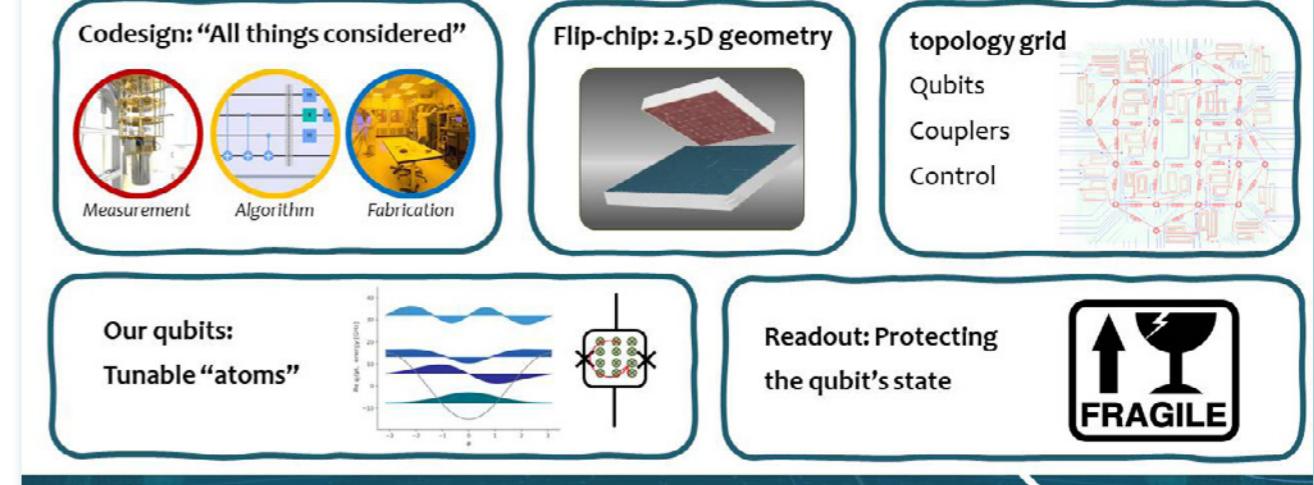
# RESEARCHER PRIZE



## PROF. NADAV KATZ

**Prof. Nadav Katz** is an experimental physicist specializing in superconducting circuits for quantum computing. His research focuses on coherence-enhancing protocols, measurement techniques and new materials and designs for qubits. He founded the Hebrew University quantum center in 2012 and is currently the Chair of the Racah Institute of Physics. He is a member of the board of the Israeli Physical Society and the Israeli Energy Forum. He is the founder and CTO of Qhipu Quantum LTD, a full-stack quantum computing company. Nadav enjoys science fiction, chess and hiking. He is married with 4 children and lives in Jerusalem.

## 20 Qubit Processing Unit



## RESEARCH DESCRIPTION

As the CTO of Qhipu Quantum LTD, Nadav led the design, integration, testing and calibration of the first 20-qubit Israeli superconducting quantum processor (QPU). This processor is based on a complex multi-chip assembly, and was carefully designed by full RF simulation of the complex structures, and a novel subsequent quantum analysis.

The design of the QPU was based on a unique application driven approach. The QPU topology of connectivity between the qubits was optimized by benchmarking a specific quantum algorithm and its performance on different connectivity maps. This unique co-design approach was led by Katz and the Qhipu team.

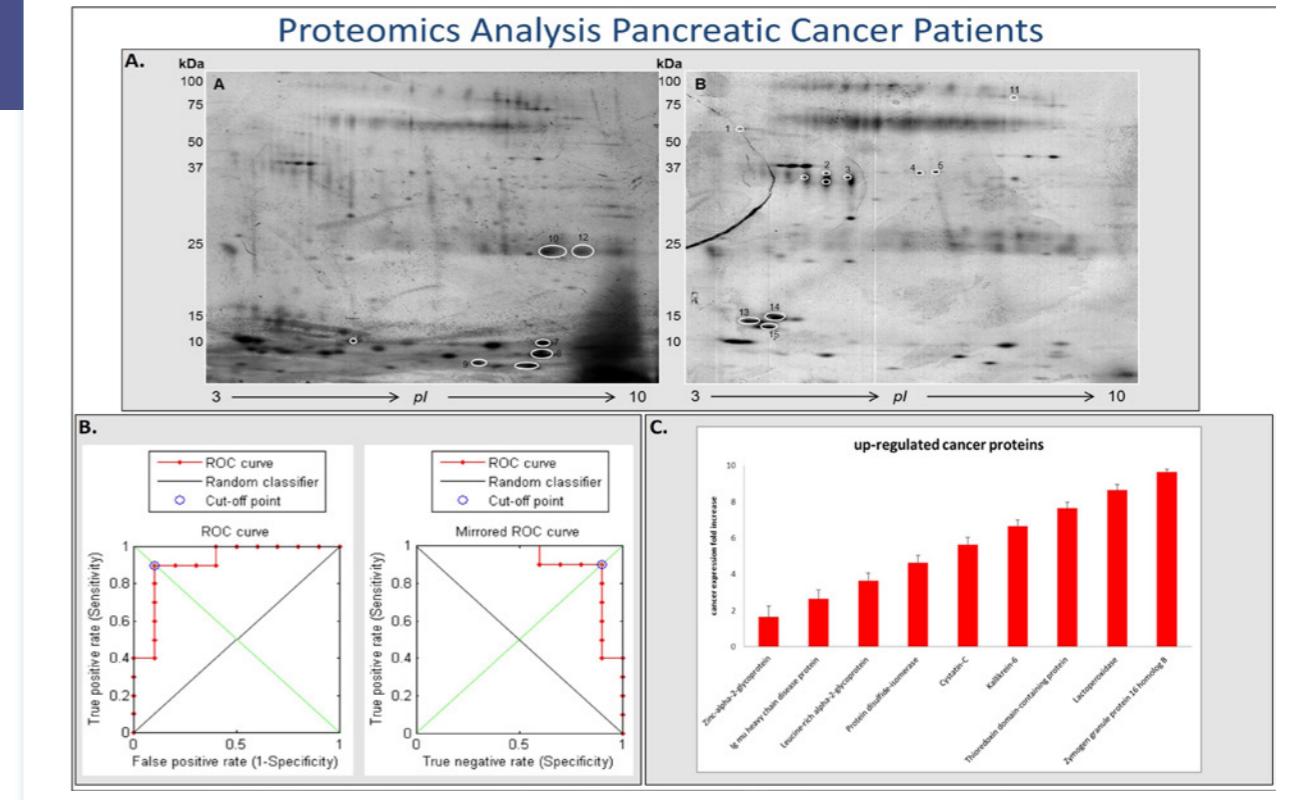
Katz has been designing, fabricating and testing innovative superconducting devices for over 15 years, and notably succeeded in building and patenting a high-kinetic inductance quantum-limited amplifier. Such amplifiers are a critical path-innovation for scaling to larger quantum computers.

# STUDENT PRIZE



## DR. OMER DEUTSCH

**Dr. Omer Deutsch**, DMD, PhD, is one of the co-founders and CEO of Salignostics, a company pioneering saliva-based diagnostics. He completed his PhD under the supervision of Prof. Aaron Palmon and Prof. Doron Aframian at the Faculty of Dental Medicine of the Hebrew University. His thesis, "Examination of Proteomic Pretreatment Strategies for Increased Diagnostic Value of Human Oral Fluids in Health and Disease," focused on improving the clinical utility of saliva through proteomics. He has authored peer-reviewed publications and is a co-inventor on several patents. Omer has received international recognition for research excellence, including the Canadian Friends of the Hebrew University Prize for Excellence. He occasionally lectures at the Hebrew University and other academic institutions on dental medicine, salivary diagnostics, and academic tech entrepreneurship. Since founding Salignostics, he has led its strategic and scientific development.



## RESEARCH DESCRIPTION

The research originated at the Hebrew University's Faculty of Dental Medicine, in a multidisciplinary effort to enhance the diagnostic value of human oral fluids. Early work focused on overcoming a major barrier in salivary proteomics: the masking effect of high-abundance proteins such as amylase, albumin, and immunoglobulins. By developing effective pretreatment strategies to deplete these proteins, it became possible to reveal and analyze low-abundance salivary biomarkers relevant to systemic diseases.

These technologies enabled the identification of potential protein signatures for complex conditions such as pancreatic cancer and Sjögren's syndrome—diseases that currently lack simple, non-invasive diagnostic tools. The research demonstrated that saliva, when properly processed, can serve as a reliable diagnostic medium with distinct advantages over blood or tissue sampling.

This foundational work evolved into a broader diagnostic platform, transferred through Yissum—the Hebrew University's tech transfer company—and

expanded within Salignostics. The company was co-founded by researchers from Prof. Aaron Palmon's lab, including Prof. Palmon, Dr. Guy Krief, Dr. Yoav Neumann, Dr. Raluca Cohen, and Dr. Omer Deutsch. Together, they translated academic research into scalable diagnostic products.

Among the flagship innovations are Salicov, a rapid saliva-based Covid-19 test developed in part under the prestigious NIH RADx program. Salicov was one of only 28 products to reach the full-scale industrialization stage through the accelerator, selected from thousands of applicants worldwide. Another key product is Salistick, the world's first saliva-based pregnancy test to receive CE, AMAR, and TGA approvals. In 2023, TIME Magazine named Salistick one of the Best Inventions of the Year.

Salignostics' platform combines optimized collection, filtration, and assay integration, forming the basis for a versatile and scalable system for future saliva-based diagnostics worldwide.

# KAYE – EINSTEIN SCHOLARSHIPS

3<sup>RD</sup> YEAR

2024-2025



**Carla Azar**, Ph.D. Candidate in Medicine

Faculty of Medicine

**Zahala Bar On**, Ph.D. Candidate in Medicine

Faculty of Medicine

**Lutfi Hodali**, Ph.D. Candidate in Medicine

Faculty of Medicine

**Meray Kadee**, Ph.D. Candidate in Agriculture

The Robert H. Smith Faculty of Agriculture, Food and Environment

**Evyatar Sar-Shalom**, Ph.D. Candidate in Agriculture

The Robert H. Smith Faculty of Agriculture, Food and Environment

## PREVIOUS WINNERS

2024

**INVENTOR: PROF. OFRA BENNY**

The School of Pharmacy, Institute for Drug Research  
Faculty of Medicine

**Invention: Microfluidic Chips and Systems**

**INVENTOR: PROF. ZVI PELEG**

Department of Biochemistry, Food and Nutrition  
The Robert H. Smith Faculty of Agriculture, Food and Environment

**Invention: Develop a novel genetic approach for sesame weed control and enhance yields**

**INVENTOR: PROF. YOSSI TAM**

The School of Pharmacy, Institute for Drug Research  
Faculty of Medicine

**Invention: Novel Translational Approach: Peripherally Restricted CB1 Antagonists for Metabolic Health**

**INVENTOR: MR. TOMER BABU**

The School of Pharmacy, Institute for Drug Research  
Faculty of Medicine

**Invention: A Platform for Development of Novel Classes of Multi-Targeting Anticancer Prodrugs**

2023

**INVENTOR: DR. LIOR NISSIM**

The Department of Biochemistry and Molecular Biology  
Faculty of Medicine

**Invention: Proprietary synthetic biology platforms.**

**INVENTOR: PROF. NURIT ARGOV**

Department of Animal Sciences  
The Robert H. Smith Faculty of Agriculture, Food and Environment

**Invention: Wilk - production of milk components that are unique to milk, which cannot be produced nor obtained from other sources.**

**INVENTOR: DR. HAITHAM AMAL**

The School of Pharmacy, Institute for Drug Research  
Faculty of Medicine

**Invention: A Novel Integrative Blood/Microbiome Platform for the Diagnosis and Therapy of Autism Spectrum Disorder**

**INVENTOR: PROF. ROIE YERUSHALMI**

The Institute of Chemistry and the Harvey M. Krueger Center for Nanoscience and Nanotechnology  
Faculty of Sciences

**Invention: High-performance composite materials enabled by atomic and molecular layer deposition.**

**INVENTOR: MS. ADI AMAR-SCHWARTZ**

The Department of Biochemistry and Molecular Biology  
Faculty of Medicine

**Invention: Modulation of m6A RNA modification to inhibit mRNA degradation in genetic diseases and cancer**

**INVENTOR: MS. ORTAL YERUSHALMY**

The Institute of Biomedical and Oral Research (IBOR)  
Faculty of Dental Medicine

**Invention: IPB – Israeli Phage Bank**

# PREVIOUS WINNERS

2022

**INVENTORS: PROF. ITAMAR GATI**

School of Education

**DR. MICHAL PHILIPS – BERENSTEIN**

School of Education

**Invention: Reducing Dropout from Higher Education by Assessing Psychosocial Readiness for College**

**INVENTOR: PROF. RAMI I. AQEILAN**

The Lautenberg Center for Immunology and Cancer Research,  
Faculty of Medicine

**Invention: AAV-Mediated Delivery in WWOX-Related Human Neurological Diseases**

**INVENTOR: PROF. ZVI HAYOUKA**

Institute of Biochemistry, Food Science and Nutrition  
The Robert H. Smith Faculty of Agriculture, Food and Environment

**Invention: Random Antimicrobial Peptide Mixture to Tackle Bacterial Contamination in Various Technologies**

**INVENTOR: MR. NADAV WALLIS**

Ph.D. student in Prof. Joel Yisraeli's lab at the Department of Developmental Biology and Cancer Research, in the Institute for Medical Research, Israel–Canada  
Faculty of Medicine

**Invention: IGF2BP Inhibitors as a Novel Target for Cancer Therapy**

**INVENTOR: MS. AVANTHIKA VENKATACHALAM**

Doctoral candidate in Prof. Yinon Ben Neriah's lab.  
The Lautenberg Center for Immunology and Cancer Research  
Faculty of Medicine

**Invention: Targeting Cancer Vulnerabilities in Acute Leukemia**

**INVENTOR: DR. HIBA NATSHEH**

Postdoctoral fellow in Prof. Elka Touitou's laboratory of the Innovative Dermal, Transdermal, and Transmucosal Drug Delivery  
Institute for Drug Research  
Faculty of Medicine

**Invention: A New Nanotechnology for Enhanced Drug Delivery to the Brain**

2021

**INVENTOR: PROF. DAVID NAOR**

The Lautenberg Center for Immunology and Cancer Research  
Faculty of Medicine

**Invention: Synthetic 5-MER peptide (MTADV), recognizing Serum Amyloid A (SAA), alleviates chronic inflammation models, including IBD: A new potential drug (MTADV) and a new target (SAA) for chronic inflammations.**

**INVENTOR: PROF. ROTEM KARNI**

Diabetes Research Center  
Faculty of Medicine

**Invention: Translating findings into new therapies for cancer and other genetic diseases.**

**INVENTOR: PROF. LIOZ ETGAR**

The Institute of Chemistry  
Faculty of Sciences

**Invention: Green energy by recoverable fully printable perovskite solar cells.**

**INVENTOR: PROF. FRANCESCA LEVI-SCHAFFER**

School of Pharmacy  
Faculty of Medicine

**Invention: Identify new targets for prophylaxis/treatment of allergic disease such as asthma, atopic dermatitis, allergic rhinitis and conjunctivitis by specifically studying the two main effector cells of these conditions, the mast cells and the eosinophils.**

**INVENTOR: DR. VLAD SHUMEIKO**

Completed his Ph.D. under the supervision of Prof. Oded Shoseyov  
The Robert H. Smith Faculty of Agriculture, Food and Environment

**Invention: An artificial optical nose system for smells detection and classification.**

2020

**INVENTOR: PROF. AMOS NUSSINOVITCH**

Department of Biochemistry, Food Science and Nutrition  
The Robert H. Smith Faculty of Agriculture, Food and Environment

**Invention: Developing edible protective films to extend postharvest shelf life of fresh and processed fruit and vegetable**

**INVENTOR: PROF. ELKA TOUITOU**

School of Pharmacy, Institute for Drug Research  
Faculty of Medicine

**Invention: Breakthrough technology of delivery systems for pharmaceutical cannabinoid products**

**INVENTOR: PROF. RUTH GALLILY**

The Lautenberg Center for General and Tumor Immunology  
Faculty of Medicine

**Invention: The discovery that CBD is a powerful anti-inflammatory and analgesic and that it is also useful in diabetes and obesity**

**INVENTOR: ORIT BERHANI**

Ph.D. Student in Prof. Ofer Mandelboim's lab at the Lautenberg Center for Immunology and Cancer Research  
Faculty of Medicine

**Invention: A new immunotherapy involving Natural Killer cells and Bi-and tri-specific antibodies**

**INVENTOR: AMIJAI SARAGOV**

Completed his Ph.D. under the supervision of Dr. Michael Berger  
Faculty of Medicine

**Invention: Devised a novel strategy that enable T cells to exclusively utilize alternative carbon source to glucose**

2019

**INVENTOR: PROF. YOSSI PALTIEL**

The Quantum Nano Engineering Laboratory, Applied Physics Department

**Invention: A generic way to synthesize and separate chiral enantiomers**

**INVENTORS: PROF. GABRIEL NUSSBAUM**

MD PhD. Expertise in innate immune signaling in infection and autoimmunity. Institute of Dental Sciences.

**PROF. AMNON HOFFMAN**

PhD. Expertise in bio-pharmaceutics, drug delivery and clinical pharmacy. Institute of Drug Research.

**PROF. CHAIM GILON**

PhD. World renowned expert in peptide chemistry, inventor of the backbone cyclization concept for peptide drug design and development. Institute of Chemistry.

**Invention: MyR-c(MyD 4-4), a novel cyclic peptide drug lead for autoimmune disease and cancer therapy**

**INVENTOR: PROF. OREN TIROSH**

Redox Biology Lab.  
Institute of Biochemistry, Food Science and Nutrition, Robert H. Smith Faculty of Agriculture, Food and Environment

**Invention: Novel approach for safe preservation of meat products**

**INVENTOR: MR. JOSHUA MOSS**

MD-PhD student under the mentorship of Prof. Yuval Dor at the Faculty of Medicine and Prof. Tommy Kaplan at the School of Computer Science and Engineering

**Invention: A blood test to detect and localize cell death**

**INVENTOR: MS. BAT-EL COHEN**

PhD student in Prof. Lioz Etgar's research lab  
The Institute of Chemistry

**Invention: Incorporation of 2D perovskite towered enhanced efficiency and stability in solar cells**



# PREVIOUS WINNERS

2018

**INVENTOR: PROF. URIEL LEVY**

Department of Applied Physics, Faculty of Science  
The Harvey M. Krueger Family Center for Nanoscience & Nanotechnology

**Invention: CMOS Compatible Low Cost Photodetection in the Short Wave Infrared (SWIR)**

**INVENTOR: PROF. YAAKOV NAHMIAS**

Department of Bioengineering, The Selim and Rachel Benin School of Engineering and Computer Science  
The Alexander Silberman Institute of Life Sciences, Faculty of Science

**Invention: Liver on a Chip Technology (Tissue Dynamics)**

**INVENTOR: PROF. RAM REIFEN**

The School of Nutritional Sciences  
The Robert H. Smith Faculty of Agriculture, Food and Environment

**Invention: ChickP- The New Vegetarian Protein**

**INVENTOR: MS. ADI RECHES**

Department of Immunology  
Lautenberg Center for General and Tumor Immunology  
Faculty of Medicine  
**Invention: Blocking Antibodies against Nectin4 as Cancer Immunotherapy**

**INVENTOR: MRS. SIVAN NIR-LUZ**

Department of Chemistry, Institute of Chemistry  
Faculty of Science  
**Invention: Simple Peptide Particles with Dual Antifouling and Antimicrobial Activity**

2017

**INVENTORS: PROF. YUVAL DOR AND DR. RUTH SHEMER**

Department of Developmental Biology and Cancer Research,  
Institute for Medical Research Israel-Canada  
Hebrew University-Hadassah Medical School.  
**Invention: Noninvasive Detection of Tissue Damage**

**INVENTOR: PROF. BERTA LEVAVI-SIVAN**

Department of Animal Science,  
The Robert H. Smith Faculty of Agriculture, Food and Environment  
**Invention: Growth and Reproduction in Aquaculture**

**INVENTOR: PROF. AMIRAM GOLDBLUM**

Institute for Drug Research, School of Pharmacy,  
Faculty of Medicine  
**Invention: A Novel Generic Algorithm Applied for Discovering Highly Active Drug Candidates**

**INVENTOR: MR. IDO SAGI**

Department of Genetics Alexander Silberman Institute for Life Sciences,  
Faculty of Science  
**Invention: Haploid Human Embryonic Stem Cells and Somatic Cells**

**INVENTOR: MS. SUAAD ABD-ELHADI**

Department of Biochemistry and Molecular Biology,  
Institute for Medical Research Israel-Canada,  
Hebrew University-Hadassah Medical School  
**Invention: Lipid's ELISA: A Highly Sensitive Diagnostic Assay for Parkinson's Disease**

2016

**INVENTOR: PROF. YOEL SASSON**

Casali Institute of Applied Chemistry  
Institute of Chemistry, Faculty of Science  
**Invention: Novel Reagent for Purification of Oil-Contaminated Soil**

**INVENTOR: DR. MEITAL RECHES**

Institute of Chemistry, Faculty of Science  
**Invention: Biocompatible and Environmentally-Friendly Antifouling Materials**

**INVENTORS: PROF. REUVEN REICH, PROF. ELI BREUER, PROF. AMNON HOFFMAN**

Institute for Drug Research  
School of Pharmacy, Faculty of Medicine  
**Invention: Novel Carbamoylphosphonate-Based Compounds for the Treatment and Prevention of Metastatic Diseases**

**INVENTOR: DR. PINCHAS TSUKERMAN**

Department of Immunology and Cancer Research  
Institute for Medical Research Israel-Canada (IMRIC),  
Faculty of Medicine  
**Invention: New Immunotherapy Against Cancer**

**INVENTOR: MR. OREN BEN DOR**

Department of Applied Physics  
The Rachel and Selim Benin School of Computer Science and Engineering  
Faculty of Science  
**Invention: Chiral Molecular-Based Spin Devices**

2015

**INVENTOR: PROF. URI BANIN**

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

**Invention: Semiconductor Quantum Rods - A Quantum Leap for Displays**

**INVENTOR: PROF. OFER MANDELBOIM**

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

**INVENTOR: DR. ZVI PELEG**

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

**INVENTOR: DR. ELAD HOROWITZ**

Department of Immunology and Cancer Research  
Institute for Medical Research Israel-Canada (IMRIC), Faculty of Medicine  
**Invention: Methods of Predicting Efficacy of an Anti-VEGFA Treatment for Solid Tumors**

**INVENTOR: MS. GEULA HANIN**

Department of Biological Chemistry, Silberman Institute of Life Sciences, Faculty of Science  
**Invention: Down Regulating miRNA-132 for the Treatment of Lipid Related Disorders**



# PREVIOUS 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**

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-AVRAHAM**

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**

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.**

Ph.D. 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**

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 Pharmaceutics, Agriculture and Cosmetics**

**INVENTOR: MR. YFTAH 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**

# PREVIOUS 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**

Ph.D. 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**

Ph.D. 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**

Ph.D. Supervisor: Prof. Jehoshua Katzhendler Institute for Drug Research, School of Pharmacy, Faculty of Medicine

**MR. ROEE VIDAVSKI**

Ph.D. 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**

Ph.D. 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**

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**

Ph.D. 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**

Ph.D. 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**

Ph.D. 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**

Ph.D. student of Prof. Meir Bialer and Prof. Boris Yagen, School of Pharmacy

**Invention:  $\alpha$ -Fluoro and  $\alpha$ -Chloro 2,2,3,3-Tetrame thycyclopropylcarboxamide: Two Novel Chemical Entities for the Treatment of Epilepsy and Other Disorders**

# PREVIOUS 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**

Ph.D. 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**

Ph.D. 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 SHEYN**

Ph.D. 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**

Ph.D. student under the supervision of Prof. Haya Lorberbaum-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**

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 Acid 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**

# PREVIOUS 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, Department of Medicinal Chemistry and Natural Products, School of Pharmacy, Faculty of Medicine

**Invention: Synthesis and Anti-microbial Activity of a Novel Series of Alkyldimethylamine Cyanoboranes and their Derivatives**

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, Department of Physical Chemistry and Center for Nanoscience and Nanotechnology, Faculty of Science

**Invention: Semiconductor Nanocrystals with Conductive Zone**

**INVENTOR: MR. ADEL JABBOUR**

Student of Prof. Doron Steinberg and Prof. Morris Srebnik

Department of Medicinal Chemistry and Natural Products, School of Pharmacy and Institute of Dental Sciences, Faculty of Dental Medicine

**Invention: 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 Course Registration Project Team

**Invention: Computerized Student Course Registration Project Team "Smart Raffle"**



# PREVIOUS 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 Organoboronic 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**

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, Three 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**

# PREVIOUS 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: OMNISTERO: 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

## 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

# PREVIOUS 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 Glicinamide (TV 1901): A New Anti-epileptic (AED) and CNS Drug for the Treatment of Migraine, 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**

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**



# PREVIOUS WINNERS

**1998**

**INVENTOR: PROF. ITAMAR WILLNER**

Institute of Chemistry, Faculty of Science

**Invention: Layered Electrically-Contacted Enzyme-Electrodes and Antigen/Antibody Assemblies 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**

**1997**

**INVENTORS: PROF. YECHEZKEL 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 AT LAS**

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. VARDAT 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**

**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**

**INVENTORS: 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**

# PREVIOUS 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. YEchezkel 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**

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: The Hebrew University Information Retrieval System**

**INVENTORS: PROF. HAIM RABINOWITCH AND PROF. NACHUM KEDAR**

Department of Field and Vegetable Crops, Faculty of Agriculture

**Invention: Development of Long Shelf-life Tomatoes**



האוניברסיטה העברית בירושלים

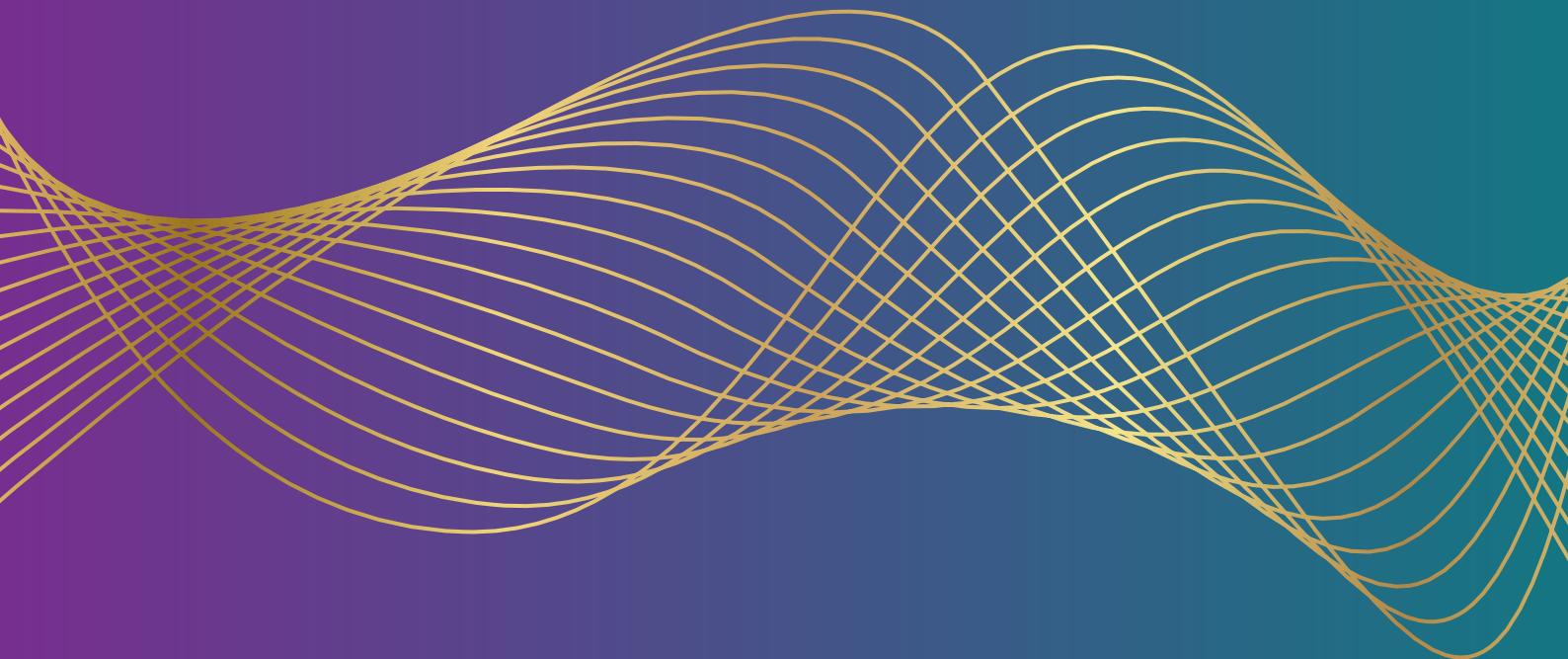
THE HEBREW UNIVERSITY OF JERUSALEM

الجامعة العربية في اورشليم القدس



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JUNE 2025



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