THE KAYE INNOVATION AWARDS
AT THE HEBREW UNIVERSITY OF JERUSALEM

DEPARTMENT OF PHYSICS WORKSHOP
CONSTRUCTION OF ELECTRICAL MEASURING INSTRUMENTS, GRINDING AND INSPECTION OF BEARING JEWELS

Campus: Mount Scopus
Jan 1, 1942
Photo by Bernheim
ISAAC KAYE

ISAAC KAYE

The prestigious Kaye awards are given annually to inventors whose works best exemplify the joining of scientific excellence and commercial potential. Yissum, the University's technology commercialization company, has been a natural and proud participant in the selection process of Hebrew University faculty and students for these esteemed awards for the last 24 years.

Yissum enjoys a prominent place among the world's leading technology transfer companies since its inception in 1964. Yissum has registered over 10,000 patents, covering close to 1,000 inventions. Yissum completed nearly 1,000 license agreements to these technologies with global commercial partners, and formed more than 180 start-up companies, some of which have gone on to be acquired or listed on public markets.

Many of the innovators behind these companies and technologies have been recognized by the receipt of the Kaye award.

This year's first prize is jointly awarded to two prominent and entrepreneurial faculty members, Prof. Uriel Levy, Head of the nanophotonics and optofluidic lab at the Department of Applied Physics, and Prof. Koby Nahmias, Director of the Grass Center for Bioengineering.

The first prize award is given to Prof. Uriel Levy for his invention: "CMOS compatible low cost photodetection in the short wave infrared (SWIR)". Short wave infrared (SWIR) imaging is highly useful for a variety of applications including, among others, autonomous cars, spectroscopy, and medical applications. Silicon, which is the material of choice for low cost, visible range imagers, does not absorb light in the SWIR and thus cannot be used. Prof. Levy's nanophotonics research group developed a solution that is compatible with CMOS (a technology for constructing integrated circuits) and thus usable for low cost imaging in the SWIR. Based on this knowledge, Prof. Levy co-founded Trilify, a start-up company that is focused on developing and using low cost CMOS compatible processes for SWIR imaging.

The first prize award also is given to Prof. Yaakov Nahmias for his invention: "Liver on a Chip Technology". Prof. Nahmias' and his colleagues develop multiple tools for the study of liver-toxicology that have been licensed to external companies as well as spun off as start-up companies. This award is given for the development of the liver-on-chip technology that monitors metabolic function in real time. The platform is based on a microfluidic chip that mimics the normal physiology of the liver, creating gradients of nutrients while hindering engineered liver tissue in specialized niches. Nanofabricated oxygens, glucose, and lactate sensors are embedded in the tissue, allowing the chip to measure changes in cellular health in minutes rather than days or weeks. Importantly, the organ-on-chip technology was incorporated earlier this year by Prof. Nahmias and Yissum into the biotechnology start-up Tissue Dynamics, aiming to support kill-early decisions in drug development and precision medicine, using real time sensing of tissue dynamics in a physiological setting.

The second prize this year is awarded to Prof. Ram Reifen of The Faculty of Agriculture for his research: "ChickP - The New Vegetarian Protein". Prof. Reifen's innovative technology addresses a growing awareness among the public about healthy food and sustainable food sources, which has led to a rising interest in the plant-based foods. This change in eating patterns requires new products that address consumer requirements for healthy and tasty products that replace meat and cheese with similar high protein nutritional values. Prof. Reifen's group focuses on chickpea, the second most important legume crop around the world, and utilizes non-GMO chickpea seeds that contain no phytoestrogens at all. Prof. Reifen, Yissum, and its investment partners at AgInnovation formed a start-up company called ChickP, which developed a unique and proprietary scaled-up process for producing functional chickpea protein. This innovation allows the food industry to enrich its products for the first time with high-quality chickpea protein (60-90%), as well as to produce meat and dairy replacements having a complete protein with the highest levels.

The prize is also awarded to two promising students: Mrs. Sivan Nir-Luz for her research on "Simple peptide particles with dual anti-inflamming and antitumor activity", and Ms. Adi Reches for her research on "Blocking antibodies against neCY4 as cancer immunotherapy".

Yissum is committed and proud to be actively involved in the successful commercialization of these and hundreds of other Hebrew University innovations. Our dedicated team diligently bridges between academia and the commercial and entrepreneurial communities in order to bring the fruits of first-class academic research to society at large.

We are inspired by Mr. Kaye's generosity and personal commitment to support Hebrew University's researchers in their constant quest for innovation, and extend our sincere congratulations to this year’s innovative prize winners.

Dr. Yaron Daniely
CEO & President
KAYE WINNERS 2018

Researcher - First Prize

PROF. URIEL LEVY
Department of Applied Physics
Faculty of Science
The Harvey M. Krueger Family Center for Nanoscience & Nanotechnology
CMOS Compatible Low Cost Photodetection in the Short Wave Infrared (SWIR)

Researcher - First Prize

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
Liver on a Chip Technology (Tissue Dynamics)

Researcher - Second Prize

PROF. RAM REIFEN
The School of Nutritional Sciences
The Robert H. Smith Faculty of Agriculture, Food and Environment
ChickP- The New Vegetarian Protein

Student - First Prize

MS. ADI RECHES
Department of Immunology
Lautenberg Center for General and Tumor Immunology
Faculty of Medicine
Blocking Antibodies against Nectin4 as Cancer Immunotherapy

Student - Second Prize

MRS. SIVAN NIR-LUZ
Department of Chemistry
Institute of Chemistry
Faculty of Science
Simple Peptide Particles with Dual Antifouling and Antimicrobial Activity

Antifouling/antimicrobial surface
CMOS Compatible Low Cost Photodetection in the Short Wave Infrared (SWIR)

Cameras operating in the short wave infrared (SWIR) spectral band are highly desired for a variety of applications such as autonomous cars, spectroscopy, medical analysis and more. For example, bad weather conditions such as fog and dust affect infrared cameras in the visible band of the spectrum. Silicon, which is the material of choice for default camera sensors, does not absorb light in the SWIR and thus cannot be used for SWIR imaging. Here, at the Hebrew University of Jerusalem, Prof. Uriel Levy has circumvented this obstacle and developed high efficiency CMOS compatible photodetectors.

His approach is based on the process known as internal photoemission (IPE) combined with novel optical structures to collect light and “squeeze” it to nanoscale dimensions. In short, he has developed a novel pyramid-like structure that collects light and confines it to a nanometric volume at the apex of the pyramid. The metal-covered apex absorbs the light, generating “hot” electrons. These electrons acquire sufficient energy from the light such that they can cross the energetic barrier (known as “Schottky barrier”), and cross into the silicon where we apply voltage to swipe the electrons through the silicon and all the way into the contacts. Photocurrent is created and photo detection is achieved.

His concept allows for cost effective photo detection solution by implementing a device consisting of nothing but silicon and standard metals. This photodetector can be regarded as a pixel and thus can be expanded to create an advanced and sophisticated camera for imaging systems operating in the SWIR spectral band.
be easily implemented in various food products. and healthier (allergen-, hormone, and Gm-free), having a neutral taste and odor. Thus, it can sources currently used. as opposed to other plant proteins, the ChickP protein is safer, greener, and beverages. as a novel plant protein, ChickP protein can now provide an alternative to plant industry, as meat alternatives and dairy replacements, as well as high-protein bars, snacks, be utilized as a raw material for production of commercially valuable products for the food technology enabling the production of a functional chickpea protein (60-90%), which can protein and other plant-based ingredients. ChickP is the owner of a breakthrough patented by offering a novel solution to the unmet need for diverse vegetarian, high-quality, and safe protein and companies related to food and nutrition worldwide. As an MD with Msc in Nutrition and an MBA, Dr. Reifen founded ChickP based on an IP-protected technology, after years of basic and clinical research.

ChickP strives to provide healthier, safer & greener new and innovative high-quality chickpea-based solutions for the food industry. Its broad and unique knowledge on production of chickpea protein and by-products allows ChickP to develop premium end-products. A growing awareness among the public about healthy food and sustainable sources, together with the desire for safe, clean-label foods, has led to a rising interest in plant-based foods and high-protein products. The plant protein market is steadily growing. Alternatives to meat and dairy products are now commonplace. Current vegetarian foods are based on soy, pea, and whey proteins. However, their use is raising consumers’ concerns due to allergenicity, genetic modification, hormonal disruptors, and herbicide residues. In addition, their off-flavors preclude masking by an addition of undesired sugars. These obstacles point to an urgent need for new healthy and tasty plant-based proteins, production of meat and dairy substitutes as well as other protein-rich products, without compromising nutrition. Given that the global market for plant protein is projected to reach a value of more than $10bn by 2020, ChickP addresses this huge market by offering a novel solution to the unmet need for diverse vegetarian, high-quality, and safe protein and other plant-based ingredients. ChickP is the owner of a breakthrough patented technology enabling the production of a functional chickpea protein (60-90%), which can be utilized as a raw material for production of commercially valuable products for the food industry, as meat alternatives and dairy replacements, as well as high-protein bars, snacks, and beverages. As a novel plant protein, ChickP protein can now provide an alternative to plant sources currently used. As opposed to other plant proteins, the ChickP protein is safer, greener, and healthier (allergen-, hormone, and Gm-free), having a neutral taste and odor. Thus, it can be easily implemented in various food products.
Biofouling is an undesirable process in which organisms and their by-products encrust a surface. It is one of the main concerns today in the healthcare system; the adsorption of pathogenic bacteria to medical devices leads to hospital-acquired infections. It is also a major problem in the marine industry since the adsorption of marine organisms on ships hulls leads to an increase in the consumption of fuel and delays in transportation. In addition, it harms water treatment facilities and affects ecosystems.

Compounds that resist fouling are called antifouling materials. These materials attempt to prevent the adsorption of the biomass in advance. The last few decades saw the development of many useful solutions. However, they all suffer from drawbacks such as low stability and complex or expensive synthesis. Furthermore, the emergence of environmental issues has accentuated the search for new promising non-toxic materials.

In prior work, Nir-Luz designed a simple tripeptide that self-assembles into a coating with antifouling activity. The peptide sequence contains three elements that enable: i) its self-assembly into a film, ii) its adsorption onto any substrate, and iii) its antifouling activity. In organic solvents, the peptide forms a film that resists protein adsorption and bacterial growth.

Recently, she has shown that this tripeptide can also self-assemble into two distinctive structures in aqueous media, depending on the pH of the solution. Due to the adhesive moieties of the peptide, these assemblies can adhere to different surfaces. In addition, fluorine moieties on the peptide modify the properties of the surface to create a Teflon®-like antifouling surface.

Moreover, these assemblies can encapsulate and release active compounds such as antibiotics and biocidal nanoparticles. The combination of these compounds’ biocidal features and the antifouling activity of the assemblies results in a surface with an improved antimicrobial activity. Nir-Luz showed this concept with antibiotics and a catalytic enzyme. However, it can be easily expend to anti-quorum sensing agents, metal nanoparticles, etc.
## KAYE WINNERS

### Previous Winners

**Kaye Innovation Awards at The Hebrew University of Jerusalem**

#### Kaye Winners 2017

<table>
<thead>
<tr>
<th>Year</th>
<th>Inventor</th>
<th>Department</th>
<th>Invention</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>Prof. Yuval Dor and Dr. Ruth Sheemer</td>
<td>Department of Developmental Biology and Cancer Research, Institute for Medical Research Israel-Canada, Hebrew University-Hadassah Medical School</td>
<td>Noninvasive Detection of Tissue Damage</td>
</tr>
<tr>
<td>2016</td>
<td>Prof. Berta Levavi-Sivan</td>
<td>Department of Animal Science, The Robert H. Smith Faculty of Agriculture, Food and Environment</td>
<td>Growth and Reproduction in Aquaculture</td>
</tr>
<tr>
<td>2015</td>
<td>Prof. Amiram Goldblum</td>
<td>Institute for Drug Research, School of Pharmacy, Faculty of Medicine</td>
<td>A Novel Generic Algorithm Applied for Discovering Highly Active Drug Candidates</td>
</tr>
<tr>
<td>2014</td>
<td>Prof. Ido Sagi</td>
<td>Department of Genetics, Alexander Silberman Institute for Life Sciences, Faculty of Science</td>
<td>Haploid Human Embryonic Stem Cells and Somatic Cells</td>
</tr>
<tr>
<td>2013</td>
<td>Ms. Suaad Abd-elHadi</td>
<td>Department of Biochemistry and Molecular Biology, Institute for Medical Research Israel-Canada, Hebrew University-Hadassah Medical School</td>
<td>Lipid's ELISA: A Highly Sensitive Diagnostic Assay for Parkinson’s Disease</td>
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#### Kaye Winners 2016

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<tr>
<td>2016</td>
<td>Prof. Yoel Sasson</td>
<td>Casali Institute of Applied Chemistry, Institute for Chemistry, Faculty of Science</td>
<td>Novel Reagent for Purification of Oil-Contaminated Soil</td>
</tr>
<tr>
<td>2015</td>
<td>Dr. Meital Reiches</td>
<td>Institute for Drug Research, School of Pharmacy, Faculty of Medicine</td>
<td>Biocompatible and Environmentally Friendly Antifouling Materials</td>
</tr>
<tr>
<td>2014</td>
<td>Prof. Reuven Reich, Prof. Eli Breuer, Prof. Amnon Hoffman</td>
<td>Institute for Drug Research, School of Pharmacy, Faculty of Medicine</td>
<td>Novel Carbamoylphosphonate-Based Compounds for the Treatment and Prevention of Metastatic Diseases</td>
</tr>
<tr>
<td>2013</td>
<td>Prof. Pinchas Tsukerman</td>
<td>Department of Immunology and Cancer Research, Institute for Medical Research Israel-Canada (IMRIC), Faculty of Medicine</td>
<td>New Immunotherapy Against Cancer</td>
</tr>
<tr>
<td>2012</td>
<td>Mr. Oren Ben Dor</td>
<td>Department of Applied Physics, The Rachel and Selim Benin School of Computer Science and Engineering, Faculty of Science</td>
<td>Chiral Molecular-Based Spin Devices</td>
</tr>
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#### Kaye Winners 2015

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<tr>
<td>2015</td>
<td>Prof. Uri Banin</td>
<td>Institute of Chemistry and the Harvey M. Krueger Family Center for Nanoscience and Nanotechnology, Faculty of Science</td>
<td>Novel Nanostructures for Cancer Therapy</td>
</tr>
<tr>
<td>2014</td>
<td>Prof. Ofir Mandelboim</td>
<td>Department of Immunology and Cancer Research, Institute for Medical Research Israel-Canada (IMRIC), Faculty of Medicine</td>
<td>Development of Novel Nanoparticle-Based Vaccines for Cancer Immunotherapy</td>
</tr>
<tr>
<td>2013</td>
<td>Dr. Zvi Peleg</td>
<td>Robert H. Smith Institute of Plant Sciences and Nanotechnology, Faculty of Science</td>
<td>Development of Novel Nanoparticle-Based Vaccines for Cancer Immunotherapy</td>
</tr>
<tr>
<td>2012</td>
<td>Prof. Elad Horowitz</td>
<td>Department of Immunology and Cancer Research, Institute for Medical Research Israel-Canada (IMRIC), Faculty of Medicine</td>
<td>Methods of Predicting Efficacy of an Anti-VEGF Treatment for Solid Tumors</td>
</tr>
<tr>
<td>2011</td>
<td>Ms. Geula Hanin</td>
<td>Department of Biological Chemistry, Silberman Institute of Life Sciences, Faculty of Science</td>
<td>Down Regulating miRNA-152 for the Treatment of Lipid Related Disorders</td>
</tr>
</tbody>
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13
Liquid Crystals with Cell-Penetrating Peptides
that Inhibit Signaling through CD28

Suffering from Diseases Characterized by Chronic Inflammation and Associated
Improving the Oral Absorption of Poorly Absorbed Drugs and Proteins

Kaye Winners 2014

Inventor: PROF SIMON BENITA & DR. TAHER NASSAR
Institute: Institute for Drug Research (IDR)
School: 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
Institute: CaisC4 Center for Applied Chemistry
School: Institute of Chemistry, Faculty of Science
Invention: Transparent Conductive Coffee Rings for Touch Screens

Inventor: PROF MICHAL BANIYASH
Institute: Department of Immunology and Cancer Research
School: Institute for Medical Research Israel-Canada (IMRIC), Faculty of Medicine
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
Institute: Institute of Dental Sciences, Faculty of Dental Medicine
School: Institute of Chemistry, Faculty of Science
Invention: Novel Antibiofilm/Antibacterial Polymer for Food Packaging

Inventor: YOTAIM BAR-ON
Institute: Department of Immunology and Cancer Research
School: Institute for Medical Research Israel-Canada (IMRIC), Faculty of Medicine
Invention: Development of Novel Antibodies for the Treatment of Influenza Infections

Kaye Winners 2013

Inventor: PROF ILAN SENA
Institute: Robert H. Smith Institute for Plant Sciences and Genetics
School: Robert H. Smith Faculty of Agriculture, Food and Environment
Invention: Sourcing of Bee-Affecting Viral Genes in order to Control CO2

Inventor: PROF AVI DOMB
Institute: Institute for Drug Research (IDR)
School: School of Pharmacy, Faculty of Medicine
Invention: Mass Water Purification System

Inventor: PROF RAYMOND KAEMPER
Institute: Department of Biochemistry and Molecular Biology
School: Institute for Medical Research Israel-Canada (IMRIC), Faculty of Medicine
Invention: Reduction of Inflammatory Disease Symptoms with Short Peptides
That Inhibit Signaling through CD28

Inventor: URI BEN-DAVID
Institute: Department of Genetics
School: Silberman Institute of Life Sciences, Faculty of Science
Invention: PluriSins – Pluripotent Specific Inhibitors

Inventor: MARGANIT COHEN-ARVAKHAMI
Institute: Institute of Chemistry, Faculty of Science
School: Transdermal Delivery Vehicles for NSAIDs: The Combination of Liquid Crystals with Cell-Penetrating Peptides

Inventor: NOA KAYNAN
Institute: Department of Immunology and Cancer Research
School: Institute for Medical Research Israel-Canada (IMRIC), Faculty of Medicine
Invention: Generation of ‘Super’ Ig Antibody for Improving Medical Treatments

Kaye Winners 2012

Inventor: PROF RAPHAEL (RAFFI) GOREN
Institute: Institute for Drug Research, Faculty of Medicine
School: Institute of Chemistry, Faculty of Science
Invention: Development of New Peptide-Based Inhibitors of Protein Kinase B (PKB)

Inventor: PROF SAUL YEDGAR
Institute: Department of Biochemistry and Molecular Biology
School: 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
Institute: Department of Biochemistry and Molecular Biology
School: Institute for Medical Research Israel-Canada (IMRIC), 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
Institute: Institute for Drug Research, Faculty of Medicine
School: Institute of Chemistry, Faculty of Science
Invention: Novel T Cells Proliferation Inhibitors

Inventor: CHAMUTAL GUR, M.D.
Institute: Institute for Drug Research, Faculty of Medicine
School: Institute of Chemistry, Faculty of Science
Invention: Generation of Anti-NGKp46 mAb for the Treatment of Type 1 Diabetes

Kaye Winners 2011

Inventor: PROF HAIM D. RABINOWITCH
Institute: Robert H. Smith Institute for Plant Sciences and Genetics
School: 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
Institute: Department of Applied Chemistry, Faculty of Science
School: Institute of Chemistry, Faculty of Science
Invention: Organic Nanoparticles from Microemulsions: Enhancing Water Solubility
For Improved Biological Performance in Pharmaceutics, Agriculture and Cosmetics

Inventor: MS KATY MARGULIS-GOSHEN
Institute: Institute of Applied Chemistry, Faculty of Science
School: Institute of Chemistry, Faculty of Science
Invention: MRI YFTAH TAL-GAN
Institute: Institute of Chemistry, Faculty of Science
School: 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: Institute for Drug Research, Faculty of Medicine
School: Institute of Chemistry, Faculty of Science
Invention: Tissue Regeneration Membrane
Kaye Winners 2010

Inventor: PROF NISSIM BENVENisty
Invention: Technologies to Enable Directed Differentiation of Human Embryonic Stem Cells

Inventor: PROF ODDE SHOYOY
Invention: The Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture
Invention: 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
Invention: Binni School of Computer Science and Engineering, Faculty of Science
Invention: Video Synopsis: Summarizing and Indexing Surveillance Video

Inventor: PROF ALEXANDER VAINSTEIN
Invention: The Robert H. Smith Institute of Plant Sciences and Genetics in Agriculture
Invention: The Robert H. Smith Faculty of Agriculture, Food and Environment
Invention: Towards Tailor-Made Crops and Compounds

Inventor: MS MICHAEL ISAACSON
Invention: 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
Invention: Ph.D. student of Prof. Michal 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

Inventor: MR EZEQUIEL WEXSELBLATT
Invention: Ph.D. student of Prof. Michal Spira, Department of Neurobiology, Alexander Silberman Institute of Life Sciences, Faculty of Science
Invention: Compounds for Treating Bacterial Infections

Inventor: MR MICHAEL GROUCHKO
Invention: 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

Kaye Winners 2009

Inventor: PROF ABRAHAM HOCHBERG
Invention: Department of Biological Chemistry, Faculty of Science
Invention: From a Noncoding Oncofetal RNA to Cancer Therapy: Personalizing Medicine with H19

Inventor: PROF SHLOMO SASSON
Invention: Department of Pharmacology & Experimental Therapeutics, School of Pharmacy
Invention: Novel D-Xylose Derivatives: A New Class of Antihyperglycemic Compounds

Inventor: PROF DAPHNE ATLAS
Invention: Department of Biological Chemistry, Faculty of Science
Invention: Development of Small Molecules for the Treatment of Neurodegenerative Diseases

Inventor: PROF ARIEH GERTLER
Invention: 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 SHAH SHIBER
Invention: Ph.D. student of Prof. Elia Keshet, Institute for Medical Research Israel-Canada, Faculty of Medicine
Invention: The Identification of a Novel Prognostic and Diagnostic Marker of Preeclampsia

Inventor: MR DINA LUBASTER
Invention: 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
Invention: Ph.D. student of Prof. Oded Shoyov, Smith Institute for Plant Sciences and Genetics in Agriculture, Robert H. Smith Faculty of Agriculture, Food & Environment
Invention: Compounds Comprising Fibrous Polypeptides and Polysaccharides

Inventor: MS NETA PESEAH
Invention: Ph.D. student of Prof. Meir Balter and Prof. Boris Yagen, School of Pharmacy
Invention: α-Fluoro and α-Chloro 2,2,3,3-Tetramethylycyclopropylcarboxamide: Two Novel Chemical Entities for the Treatment of Epilepsy and Other Disorders
with Dietary Limitations due to Chronic Diseases in the Treatment of Malignancies

invention:

Department of Animal Sciences, Faculty of Agricultural, Food and Environmental Quality Sciences

inventor:

Kaye Winners

invention:

Faculty of Agricultural, Food and Environmental Quality Sciences

inventor:

Department of Animal Sciences, Faculty of Agricultural, Food and Environmental Quality Sciences

inventor:

Cationic Emulsions for Ophthalmic Drug Delivery

invention:

Faculty of Agricultural, Food and Environmental Quality Sciences

inventor:

Novel Gastro-retentive Dosage Form (GRDF) – A Means for Sustained Administration of Drugs with Narrow Absorption Window at the Upper Gastrointestinal Tract

invention:

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

inventor:

Novel Nanosized Vehicles for Triggering and Targeting of Phytochemicals

invention:

Students of Prof. Nissim Garti, Caasli Institute of Applied Chemistry, Faculty of Science

inventor:

Novel Method and Apparatus for Testing the Rolling Tack of Pressure-sensitive Adhesive Methods

invention:

Casali Institute of Applied Chemistry, Faculty of Science

inventor:

Kaye Winners 2006

invention:

Faculty of Agricultural, Food and Environmental Quality Sciences

inventor:

Kaye Winners 2004

invention:

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

inventor:

Novel Organoboronic Compounds – Synthesis and Biological Activity

invention:

University of Haifa

inventor:

Monocular Visual Processing for On-board Driving Assistance

invention:

Students of Prof. Raphael Mechoulam, Department of Medicinal Chemistry and Natural Products, School of Pharmacy and Institute of Dental Sciences, Faculty of Medicine

inventor:

New Natural Sunscreens: UVR Absorbing Compounds from Lichens and Cyanobacteria

invention:

Department of Pharmaceutical Sciences, School of Pharmacy, Faculty of Medicine

inventor:

Topical Steroidal Method for Treatment of Malignancies and Other Pathologies

invention:

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invention:

Faculty of Agricultural, Food and Environmental Quality Sciences

inventor:

Kaye Winners 2004

invention:

Department of Animal Sciences, Faculty of Agricultural, Food and Environmental Quality Sciences

inventor:

Kaye Winners 2006

invention:

Casali Institute of Applied Chemistry, Faculty of Science

inventor:

Kaye Winners 2005

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inventor:

Kaye Winners 2005

invention:

Faculty of Agricultural, Food and Environmental Quality Sciences

inventor:
Kaye Winners 2003

Kaye Winners 2002

Inventors: PROF NISSIM GARTI and DR ABRAHAM ASERIN
Invention: Nano-sized Self-assembled Structured Liquids

Inventor: Prof. Nissim Garti
Invention: Nano-sized Self-assembled Structured Liquids

Inventor: DR ABDULLAH HAJ-YEHIA
Invention: Design, Synthesis, and Biological Activity of Novel Hybrid Drugs

Inventor: Prof. Zvi Selinger
Invention: Novel Hybrid Drugs

Inventor: DR JONATHAN MIRVIS
Invention: Melton Centre for Jewish Education, School of Education

Inventor: Prof. Yoram Singer
Invention: Novel Hybrid Drugs

Inventor: MS DRORA BALABA
Invention: Faculty of Agricultural, Food and Environmental Quality Sciences

Inventor: Prof. Elie Kedar
Invention: Novel Hybrid Drugs

Inventor: ENG. TOM KOEVARY
Invention: The Centre for Process Development: A Platform for Thousands of "Inventors to Order" for Industry

Inventor: Prof. Yechezkel Barenholz
Invention: Novel Hybrid Drugs

Inventor: PROF ZICHRIA ZAKAY-RONES
Invention: University of Newcastle Disease Virus (NDV)

Inventor: Prof. Shlomo Sasson
Invention: Novel Hybrid Drugs

Inventor: MR ARIE CRUZMAN
Invention: Anti-cancer Therapy by Newcastle Disease Virus (NDV)

Inventor: Prof. Shlomo Sasson
Invention: Novel Hybrid Drugs

Inventor: MS AVIVA JOSEPH
Invention: INFUSOMIE-VAC, Three Novel, Highly Efficient Influenza Vaccines

Inventor: Prof. Shlomo Sasson
Invention: Novel Hybrid Drugs

Inventor: MR HADI ASLAN
Invention: Novel Methods for Stem Cells Based Therapy

Inventor: Prof. Yoram Singer
Invention: Novel Hybrid Drugs

Inventor: MR SHAI SHALEV-SHWARTZ
Invention: A Query Melody System

Inventor: Prof. Yoram Singer
Invention: Novel Hybrid Drugs

Inventor: MR MICKEY KOSLOFF
Invention: Drug-assisted Catalysis, Novel Cancer Therapeutics

Inventor: Prof. Zvi Selinger
Invention: Novel Hybrid Drugs

Inventor: MR ABED AL- AZIZ QUNTAR
Invention: The Synthesis of Novel Di-and Tri-Vinylphosphonates

Inventor: Prof. Zvi Selinger
Invention: Novel Hybrid Drugs

Inventor:

Kaye Winners 2002

Inventor: PROF SHMUEL BEN-SASSON
Invention: Department of Experimental Medicine and Cancer Research, Faculty of Medicine

Inventor: Prof. Shmuel Ben-Sasson
Invention: Novel Hybrid Drugs

Inventor: PROF MICHAEL SELA and DR DORON STEINBERG
Invention: Department of Oral Biology, Faculty of Dental Medicine

Inventor: Prof. Michael Sela
Invention: Novel Hybrid Drugs

Inventor: PROF MICHAEL FRIEDMAN
Invention: School of Pharmacy, Faculty of Medicine

Inventor: Prof. Michael Friedman
Invention: Novel Hybrid Drugs

Inventor: PROF W. AUBREY SOKOLNE
Invention: Department of Periodontics, Faculty of Dental Medicine

Inventor: Prof. W. Aubrey Sokolne
Invention: Novel Hybrid Drugs

Inventor: PROF GEORGE GOLOMB
Invention: Department of Pharmacology, School of Pharmacy, Faculty of Medicine

Inventor: Prof. George Golomb
Invention: Novel Hybrid Drugs

Inventor: PROF SHMUEL PELEG
Invention: School of Engineering and Computer Science, Faculty of Science

Inventor: Prof. Shmuel Peleg
Invention: Novel Hybrid Drugs

Inventor: DR SHLOMO YITZCHAIK
Invention: Molecular Layer Epitaxy (MLE)

Inventor: Prof. Shlomo Yitzchaik
Invention: Novel Hybrid Drugs

Inventor: MR EYYAN KAULSSNER
Invention: Novel Gastrointestinal Dosage Forms

Inventor: Dr. Eyyan Kaulssner
Invention: Novel Hybrid Drugs

Inventor: MS NINA ISHERRAREN
Invention: New Anti-epileptic Drug

Inventor: Dr. Nina Iserreraren
Invention: Novel Hybrid Drugs

Inventor: MR ALEXEI SHIR
Invention: Department of Biological Chemistry, Faculty of Science

Inventor: Prof. Alexei Shir
Invention: Novel Hybrid Drugs

Inventor: MR FERNANDO PATOLSKY
Invention: Targeted drug delivery to the internal cancer tissues

Inventor: Prof. Fernando Patolsky
Invention: Novel Hybrid Drugs

Inventor: MR ALEXANDER MAZEL
Invention: Department of Plant Sciences, Faculty of Science

Inventor: Prof. Alexander Mazel
Invention: Novel Hybrid Drugs

Inventor: MS LITAL ALFONTA
Invention: Institute of Chemistry, Faculty of Science

Inventor: Prof. Lital Alfonfa
Invention: Novel Hybrid Drugs

Inventor: MR YOSSI GAFNI
Invention: Skeletal Biotechnology Laboratory, Faculty of Dental Medicine

Inventor: Prof. Yossi Gafni
Invention: Novel Hybrid Drugs

Inventor: DR GADI PELLED
Invention: Skeletal Biotechnology Laboratory, Faculty of Dental Medicine

Inventor: Prof. Gadi Pelled
Invention: Novel Hybrid Drugs

Invention: Engineering of Complex Hybrid Tissues

Invention: Creating Multi-stress Resistance in Arabidopsis

Invention: Targeted dsRNA Brain Cancer Therapy

Invention: Nanoparticulate Drug Delivery Systems for Restenosis Therapy

Invention: A Test for the Detection of Toxic Forms of Iron in Human Plasma

Invention: Novel CD44 Variant: Potential Target in the Therapy of Rheumatoid Arthritis

Invention: OMNISTEREO: Capturing and Viewing 3D Stereoscopic Panoramic Images

Invention: The Lautenberg Center for Immunology, Faculty of Medicine

Invention: Nanoparticulate Drug Delivery Systems for Restenosis Therapy

Invention: The Centre for Process Development: A Platform for Thousands of "Inventors to Order" for Industry

Invention: Drug-assisted Catalysis, Novel Cancer Therapeutics

Invention: The Synthesis of Novel Di-and Tri-Vinylphosphonates
<table>
<thead>
<tr>
<th>Year</th>
<th>Title</th>
<th>Inventor(s)</th>
<th>Affiliation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017</td>
<td>IBTS-Internet Based Testing System to Replace Traditional Questionnaires and Written Tests</td>
<td>MR REUVAN AMAR</td>
<td>Department of Computer and Information Systems, Faculty of Engineering</td>
</tr>
<tr>
<td>2016</td>
<td>“Future Directions” Internet Site to Facilitate Career Decision Making</td>
<td>PROF IMTAR GATI</td>
<td>Department of Psychology, Faculty of Social Sciences, School of Education</td>
</tr>
<tr>
<td>2015</td>
<td>Antisense Technology – To Treat Various Neuropathic Syndromes</td>
<td>PROF LISA M. LERNER</td>
<td>Division of Environmental Sciences, School of Applied Science, Faculty of Science</td>
</tr>
<tr>
<td>2014</td>
<td>Novel Technology for the Generation of Electronic Circuits Using a Novel Computer-assisted Printing Method</td>
<td>PROF YONA CHEN, PROF YITZHAK HADAR, and MR AMIR TOAR</td>
<td>Department of Soil and Water Sciences, Faculty of Agricultural, Food and Environmental Quality Sciences</td>
</tr>
<tr>
<td>2013</td>
<td>The “Kishurim Project”</td>
<td>DR ANDREW SHIPWAY</td>
<td>Institute of Child Development, Faculty of Social Sciences</td>
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<tr>
<td>2012</td>
<td>Computer Authority, Mount Scopus</td>
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<td>2011</td>
<td>Novel Plant Gene “B” and Methods to Genetically Manipulate Color Formulation in Plants</td>
<td>MR NIT SIVAN</td>
<td>Department of Plant Pathology and Microbiology</td>
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<tr>
<td>2010</td>
<td>Antelope-like Stimulating Device to Reduce Stress of Wild Animals in Captivity</td>
<td>MR NIT SIVAN</td>
<td>Department of Animal Sciences, Faculty of Agricultural, Food and Environmental Quality Sciences</td>
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<td>2009</td>
<td>Drug Delivery through Positively Charged Submicron Emulsions</td>
<td>MR NIT SIVAN</td>
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<td>2006</td>
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<td>MR NIT SIVAN</td>
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<tr>
<td>2005</td>
<td>A Solution for BUG 2000</td>
<td>MR NIT SIVAN</td>
<td>Institute of Chemistry, Faculty of Sciences</td>
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<td>2004</td>
<td>Micro-organ Technology for Genetically Engineered Bio-pumps</td>
<td>MR NIT SIVAN</td>
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<tr>
<td>2003</td>
<td>Bone Gene Therapy and Molecular Pathology Laboratory</td>
<td>PROF MARIA LEON</td>
<td>Department of Pharmacology, School of Pharmacy, Faculty of Medicine</td>
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<td>2002</td>
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<td>MR NIT SIVAN</td>
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