

Full list of awards:

Innovation of Innovations:

Alpha Tau Medical, Ltd. / Israel

Alpha DaRT™ (Diffusing alpha-emitters radiation therapy) cancer treatment

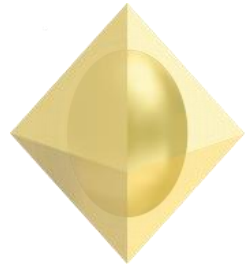
Alpha DaRT is a novel radiation technology that can treat recurrent, metastatic, and locally advanced

cancers. What makes this new therapy unique among radiation therapies is that, for the first time, it employs alpha particles for treatment of solid tumors. Alpha DaRT treatment consists of intratumorally inserted radionuclides that emit alpha particles which kill tumor cells, sparing healthy cells nearby. In

comparison to existing radiation therapies, it is highly effective, safe, and tolerable for patients. Alpha DaRT

can potentially fill a huge unmet need for treatment of advanced cancers that are resistant or have become

refractory to prior conventional therapies such as X-rays and chemotherapy, and when surgery is not an option.



Potential innovations

Award Winner: MEDICSEN /Spain

Non-invasive artificial pancreas for diabetes based on insulin delivery through a needle-free Smartpatch
Needle-free smartpatch for painless insulin delivery and machine learning algorithms to predict future patient needs, automatically delivering the correct amount of medication to improve control.

Prize Winner: Metsä Spring Oy/ Finland

Kuura textile fibre

Metsä Group is developing a new concept for the production of more sustainable textile fibres. As a hub firm, Metsä Group has orchestrated a network of over 50 partners to reach this point.

Prize Winner: National Research University "MPEI" / Russia

Autonomous cogeneration energy source based on micro hydraulic power plants using the principles of nature likeness technologies

Highly efficient hydraulic turbines for autonomous energy sources with a blade system designed using the

principles of the "whale's fin" and "shark gills" structure, which provide an increase in the efficiency and reliability of hydraulic units.

Circular economy and carbon neutrality innovations

Award Winner: Gree Electric Appliances, Inc. of Zhuhai /China

The Air Disinfection and Purification Solution Based on CKER (Coronavirus Killer) System and Its Application

A novel air disinfection and purification system called CKER (Coronavirus Killer) was developed at the crucial

moment of global epidemic prevention and control. The CKER system was based on three Gree patented

core technologies, namely the high efficiency trap technology based on the combination of high density plasma and HEPA, the accurate temperature control technology based on target temperature of virus inactivation and the rapid purification method of space airflow organization. The CKER system has already been applied in our novel antivirus air purifier, which was developed epically to kill the SARS-CoV-2 coronavirus. The test results of the third-party authority showed that the antivirus air purifier using CKER system can rapidly reduce the fine particulate matter and eliminate a range of harmful pathogens. Moreover, the field test report from Wuhan Institute of Virology, Chinese Academy of Sciences clearly proved that the inactivation rate of SARS-CoV-2 is higher than 99% after one hour operation. Up to now, the products have been exported to more than 50 countries and regions around the world, the sales of the products have reached more than USD 156.7 million, adding USD 24.1 million in profits and USD 11 million in taxes.

Prize Winner: Solarstone OÜ / Estonia

Click-on framing kit

World's first solution that renders standard PV panels into weatherproof 2in1 roofing material

Prize Winner: TATA Chemicals Limited / India

Wealth from Waste: Dead Batteries To Pigments - Cobalt aluminate

A mission towards Sustainability brought focus on converting hazardous metal extracted from waste Li-ion

batteries into a value-added chemistry that also reduces impact of mining and ecological damage. The product, cobalt aluminate pigment was successfully synthesized utilizing recovered cobalt and a major part

of the aluminium raw material from recycled sources (spent Li-ion batteries). The pigment's desirable total

solar reflectance properties are at par with that made from virgin raw materials. A good Total solar reflectance (TSR) value of pigments is desirable to keep inner temperature of buildings lower, reducing airconditioning costs and contributing to lower carbon footprint.

Health care sector innovations

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Prize Winner: Respiray / Estonia

Wearable Air Purifier

Respiray's wearable air purifier immediately eliminates 99% of airborne viruses and bacteria by disinfecting

inhaled air with safe UV-C technology.

Prize Winner: The Government of Moscow, JSC "Electronic Moscow" / Russia

AI-based computer vision technologies for medical image analysis

The analysis of 4 types of radiological tests and the diagnostics of lung cancer and pathologies, breast cancer, COVID-19, osteoporosis, and ischemic heart disease provided by the neural networks.

Prize Winner: INYCOM/Spain

CADIA: Aid system for the detection of various pathologies based on image analysis with AI techniques

Design and implementation in a regional health service of an innovative technological solution that helps

the detection of various pathologies through intelligent image analysis and its demonstration in breast cancer screening.

Education sector innovations

Award Winner: The Government of Moscow, JSC "Electronic Moscow" / Russia

Moscow Electronic School (MES) – the unified educational ecosystem

MES is an innovative educational platform, which has no analogs in Russia by the number of users. It satisfies the demand of Moscow in terms of services provided and the scope of the educational content.

Prize Winner: BASQUE CULINARY CENTER /Spain

Basque Culinary Center: Promoting culinary training and innovation in the university environment

Basque Culinary Center is a pioneering project at global level that has taken gastronomy to the academic and research sphere, launching the first Faculty of Gastronomic Sciences in Spain (the first Degree in Gastronomy) and the first technology centre specialised in gastronomy.

Prize Winner: GRUPO EDELVIVES / Spain

Go STEAM: Integrated Competency-Based Learning across all school, from Kindergarten to Secondary

A subscription platform that democratizes the development of STEAM skills across subjects: it merges content, assessment and technology in a secure, invisible and personalised way.

Public sector innovations

Award Winner: Centre for Agricultural Research (short name: CAR) / Hungary

ProPlanta Cost and Environment Friendly Fertilization Advisory System

Built on the unique database of the Hungarian long-term fertilization experiment network, the software helps the farmers in the economic and sustainable utilization of nutrients.

Prize Winner: VISESA: Vivienda y Suelo de Euskadi, S.A. – Euskadiko Etxebizitza eta Lurra, EA / Spain

Novel role of the Administration as Delegated Promoter for fostering neighbourhood rehabilitation

Visesa as one-stop-shop for administrating, contracting and supervising both the design and execution

of

the rehabilitation following a turnkey model as well as administrating the financing on behalf of the beneficiaries.

Prize Winner: Dorot Geriatric Hospital / Israel

Drones in medical service – From fighting COVID-19 to universal solutions

Autonomic drone delivery networks between medical facilities for medical supply service, including pharmacological items and preparations, COVID-19 swabs, lab. specimens, blood products, organs etc, real

time and on demand, resulting in improved medical care, fewer costs, and sustainability.

Business innovations (micro & startup companies)

Award Winner: EGA SOLUTIONS S.L. / Spain

Full traceability information management system for high value-added industries

A solution for full traceability along the mounting process for the machining of aircraft engine parts by setting up a scalable, flexible and sustainable technology ecosystem in terms of operational and economic efficiency.

Prize Winner: COCUUS / Spain

Mimethica: The first Food-Tech platform which joints multiple Technologies and proprietary ingredients (bio-ink/bio-gels) for the formulation of new food

The resources to feed the entire population are limited and we cannot address it with today's solutions. We

have started the Food Science revolution and we have implemented in the industry new Plant-Based and

Cell-Based manufacturing processes.

Prize Winner: Edeva AB / Sweden

Actibump

The Actibump is an active speed bump that is only a speed bump for those who speed. The main problem

that it solves is the compromise between traffic safety and accessibility for buses.

Business innovations (small and medium sized enterprises)

Award Winner: NOAQ Flood Protection AB / Sweden

NOAQ Boxwall

The NOAQ Boxwall is a free-standing self-anchoring temporary flood barrier

Prize Winner: COMERCIALIZADORA LA RIOJA ALTA S.L. / Spain

Quality control, traceability and food security system employing artificial intelligence

Innovative artificial intelligence system for quality control and serialization of the minimum unit of the finished product for commercial traceability and food security purposes.

Prize Winner: ATRIA INNOVATION / Spain

SIARA: AI System for identification and classification of waste through Computer Vision

SIARA improves the efficiency of the selection plants processes of plastic packaging waste, cans and

briks

through a Computer Vision system based on Deep Learning for the detection and removal of unwanted bulky waste.

Business innovations (large companies)

Award Winner: JSC "Ion Exchange Technologies", National Research University "MPEI" / Russia

High efficiency drinking-quality water purification system for feeding an open-type water heating system
The use of nanofiltration (NF) to obtain the make-up water of an open-type water heating system leads to a

reduction in operating costs and a reduction in the cost of treated water both with traditional technologies

and with reverse osmosis, as well as to obtain water more suitable for drinking compared with reverse osmosis permeate.

Prize Winner: První brněnská strojírna Velká Bíteš, a.s. / Czech Republic

Innovation of precision casting technologies for new types of castings of superalloy nickel-based turbocharger parts

A new technology for precision casting of new generation of turbocharger parts and production of shell moulds with technology consistent with the European Green Deal strategy was implemented and verified.

Prize Winner: Peikko Group Corporation / Finland

BOLDA[®], a compact, high-strength Column Shoe for bolted connections in precast concrete columns
BOLDA[®] is a new-generation compact and heavy-duty Column Shoe. BOLDA[®] Column Shoes can be used to connect a precast concrete column either to the foundation of a building or on top of another concrete column.