

WE OPEN DOOR TO THE INFINITE POSSIBILITIES OF SPACE



### **Our mission**

The ORION Space Generation Foundation takes a unique and unconventional approach in promoting space research and sparking a passion for space exploration in Hungary. The main goal of the Foundation is to disseminate knowledge about space research and to make the significance of space exploration and its future-shaping power accessible to all age groups.



#### PROMOTION OF SPACE RESEARCH AND SPACE SCIENCES

We convey the importance of space research through unique projects, integrating space sciences into everyday life situations, helping people understand how and in what ways space Research and space sciences impact their daily lives.





#### **INCREASING EDUCATION AND AWARENESS**

Our Space Generation program, which inspires young people to study and build careers in scientific and technical fields—with a strong emphasis on STEAM (Science, Technology, Engineering, Arts, and Mathematics) sciences—can also be an excellent method for discovering and supporting future scientific talents.



#### SUPPORTING RESEARCH AND INNOVATION

We support research and developments related to space Research through grants, partnerships, and talent nurturing programs.

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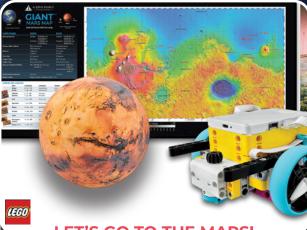
## **Education, awareness raising**







The **ORION Space Generation Foundation**, as a member of the **Aldrin Family Foundation** Giant Moon and Mars Map<sup>™</sup> community, in close cooperation with them, presents a 23m<sup>2</sup> Mars and Moon themed map educational module in Hungary.



**LET'S GO TO THE MARS!** 

With the help of the gigantic Mars Map™, children can sit, stand, walk, play, and learn together on the Red Planet. Through entertaining projects, they can get acquainted with the world of Mars, such as designing their own spacecraft and learning the names of craters and areas found on Mars. With additional tools belonging to the map - Mars planet model, LEGO robot - Hungarian children can also access special educational modules.



On the 50th anniversary of the Apollo program, the Aldrin Family Foundation further developed its pioneering Giant Mars Map™ program by launching the new giant Moon Map™. With the help of the map, students can gain a thorough knowledge of general information about the Moon, the nature of survival and development on the Moon, while also gaining worthy knowledge of past Apollo and future Artemis program missions.





# **Our special projects**

#### The shared future of vertical farms

THE SHARED FUTURE OF VERTICAL FARMS SPACE RESEARCH SPACE FOOD, COLONIZATION PLANTS, TERRAFORMING



The Foundation's **Csillagváros Ltd. Grow Stars Institute** operates Hungary and the region's only research and development-focused vertical farm unit. Since its re-establishment on December 1, 2022, it has been managing the vertical farm facility, which was originally launched in the spring of 2021. Csillagváros Ltd.'s professional CEA (Controlled Environment Agriculture) research and development vertical farm goes beyond traditional plant cultivation, focusing on innovative solutions for sustainable agriculture and space-related research.



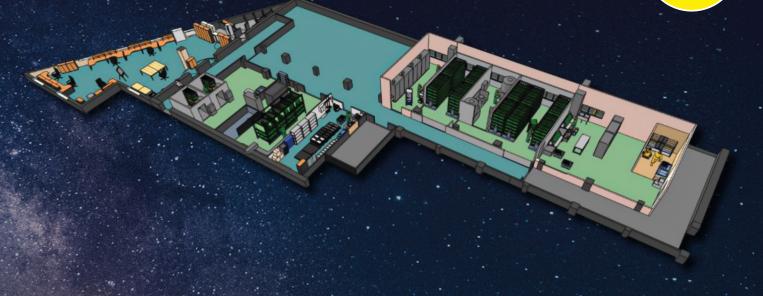






Our experiments with the cultivation of colonization plants aim not only to diversify food sources but also to ensure that astronauts on long-duration space missions have access to healthy and nutritious food. The Foundation's commitment to research, innovation, and sustainability is closely aligned with its visionary goals for colonization plants.

European Network of Living Labs



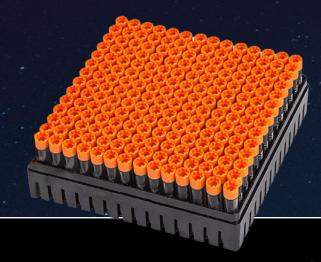
- Cultivation area: 150 m²
- 5 independent hydroponic vertical farm units
- Equipped with: nutrient circulation and fertilization system, climate control, CO2 dispenser, monitoring system
- High level of sensorization, shelf-by-shelf controllable
- lighting and irrigation
- Climate control and nutrient solution remote control by floor
- Own data collection software





As the culmination of years of experience, Csillagváros Ltd. Grow Stars Institute is soon launching its new brand, **EGREEN Farming Solutions**. This new agricultural product line will consist of fresh produce and various hardware solutions related to vertical farming.

# **MISSION POSSIBLE - biological space mission**



#### What are we sending?

- 100 grams of seeds from 23 plant species including native Hungarian varieties
- In collaboration with local producers

#### How will the samples travel?

- aboard the SpaceX Falcon 9 rocket from Vandenberg Space Force Base
- using The Exploration Company's Nyx medium-sized space capsule
- with the help of the MayaSat-1 cubesat biological incubator



- Rocket launch: 2025
- to polar Earth orbit and back to Earth
- in partnership with Genesis SFL
- with 1,000 samples on board



#### Research objectives: serving Earth and Space

- comprehensive analysis of the returned seeds with industrial and scientific partners
- breeding plants capable of surviving in space environments
- contributing to space missions and supporting sustainable agriculture on Earth, as well as maintaining long-term human presence in space













#### **Educational objectives: for future generations**

- establishing educational space plant parks in Hungary
- engaging students in the intersection of sustainable agriculture and space research
- science communication: promoting space exploration, colonization, and sustainability to students and the general public

# genesis

WWW.GENOPLANT.COM/SPACE



# **Space-themed events**

# BME SUBORBITALS ROCKET REVEAL

Hungarian National Gallery - 12.02.2024

Meeting of space sciences and fine arts



















### I. NATIONAL SPACE CONGRESS

Balatonfured Congress Center - 07.06.2024

#### An event that:

- uniquely sparked interest in space research and space sciences
- provided information to interested parties and engaged the general public in the infinite world of space
- offered a venue for knowledge sharing, networking, and inspiring future space researchers
- facilitated cooperation between scientific and industrial stakeholders
- showcased the work of organizations involved in space activities not only locally but also from other parts
  of the country
- 570 individual participants more than 500 students and teachers



























# SPACE CHARITY

# 17<sup>TH</sup> OF JANUARY, 2025

**BALATONFURED, ANNA GRAND HOTEL** 

# A PASSION THAT MAKES THE WORLD GO ROUND

# **TALENT NURTURING**

For the Foundation, the importance of mentoring in shaping the future of space research is based on the following factors:







Through mentoring, we create opportunities for the development and preparation of the next generation of space researchers.



The initiatives we support contribute to shaping the future of space research with their high-quality research and development work.

Such projects not only reflect the commitment and talent of the teams but also serve as the driving force for technological and scientific advancement in space research, which we are happy to support with the work of our Foundation.















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