SOLAR FOODS

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NASA astronaut and Starlab Space CEO Tim Kopra appointed as Solar Foods' advisor for space applications

Solar Foods has appointed Starlab Space CEO, colonel (ret.) and former NASA astronaut Tim Kopra as an advisor for Solar Foods' space applications to support the development and commercialisation of its solution, with the aim to take Solein to Moon and Mars. Solar Foods aims for its technology to become integral to human space habitats. Solein® production technology offers an attractive value add to commercial space habitat operators through substantial reduction in resupply needs of food and especially water.

Solar Foods has appointed former NASA astronaut and Starlab Space CEO Tim Kopra as the company's space advisor. As an advisor, **Tim Kopra** will bring invaluable knowledge to steer the development of Solar Foods' space food production technology and the business opportunities in the space industry. The predominant focus of commercial human spaceflight and space station development is currently in the United States. Starlab Space is a leading commercial LEO (low Earth orbit) Destinations company developing a commercial replacement for the ISS (International Space Station), which will be deorbited by the end of 2030.

"We are so excited to have Tim on board on Solar Foods' journey. Not only is he the CEO of a leading commercial space station company, but he has also previously spent 244 days in space. Therefore, he brings in incredible amount of insight about what it takes to develop flight certified space technology and concrete experience about consuming food in space", says **Arttu Luukanen**, Senior Vice President Space & Defence at Solar Foods.

Kopra will be working closely with the Solar Foods Space & Defence team. The aim is to integrate Solar Foods' Solein fermentation technology with the onboard life support systems of future commercial space stations. As part of the collaboration, a technology development roadmap will be created, strategic collaboration and funding platforms will be identified, and the business plan and earnings model will be reviewed during the autumn 2025.

"Solar Foods' innovative technology for food production has direct implications for successful space missions in LEO and beyond. I'm excited to work with such a professional team and their advancements that have implications for long-duration space flight," says **Tim Kopra**, Starlab Space CEO.

“We are determined to help take humanity deeper into space, while at the same time scaling Solein production here on Earth. Solar Foods is a new entrant to space exploration, and we believe that having Tim as an advisor will help us to enter and become a part of the Commercial LEO destinations industry cluster”, Luukanen says.

Growing food in space: How Solein can feed the astronauts of tomorrow

As space missions extend further from Earth, traditional methods of supplying food become unfeasible, due to for example the high costs. It already costs tens of thousands of dollars to send just a kilogram of food to low Earth orbit. Sending food to Mars not only becomes prohibitively expensive, but food can also go bad during the multi-year mission to the Red Planet. With human presence on the Moon being planned through NASA’s Artemis program and ambitions to send astronauts to Mars, food production in space becomes not just important but mission critical.

Solar Foods was selected as the international category winner of NASA’s and CSA’s (Canadian Space Agency) Deep Space Food Challenge, which brought the company to the centre of the stage as a promising solution provider for future space explorers. The win has accelerated the company’s development of space food production technology. To date, Solar Foods has constructed a purpose-built technology demonstrator and is currently developing bioreactor architectures suitable for zero-gravity operations. The company has also successfully completed their initial technology development project with ESA (European Space Agency) and anticipates further collaboration with ESA and industry partners.

Solar Foods’ technology allows the production of protein in space: Solein is produced through gas fermentation, using carbon dioxide and hydrogen as its main feedstock. The technology can also help close critical water loops in space. In space habitats, oxygen is generated by splitting water molecules. While the oxygen is used by the crew, the hydrogen is typically vented into space, wasting valuable water. By feeding this hydrogen and the CO2 exhaled by astronauts on the spacecraft into Solar Foods’ process, the water can be recovered while producing Solein at the same time.

“The annual savings of the Solein solution can reach tens of millions of dollars. Considering a planned lunar base sometime in the future, the annual cost savings might be in the hundreds of millions. The value of a reliable food solution on a mission to Mars is ten, maybe even a hundred times that of those in LEO or on the Moon”, Luukanen says.

Read more about Solar Foods’ space technology here.

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What is Solein?
Solein is an all-purpose protein grown with the air we breathe: The unique bioprocess takes a single microbe, one of the billion different ones found in nature, and grows it by fermenting it using air and electricity. Solein is a nutritionally rich and versatile ingredient which can replace protein virtually in any food. Solein can also be used as a fortifier to complement the nutritional profile of various foods: it can be a source of iron, fibre and B vitamins, and it can also bring different techno-functionalities into food products. Learn more at www.solein.com.

About Solar Foods
Solar Foods produces Solein®, a protein created using carbon dioxide and electricity. This innovative production method is independent of weather and climate conditions, eliminating the need for traditional agriculture. Founded in Finland in 2017, Solar Foods is listed on the Nasdaq First North Growth Market Finland. Learn more at www.solarfoods.com and investors.solarfoods.com.

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