

Process And Kit To Investigate Microgravity Effect On Animal/Vegetable Cells Under Extra-terrestrial Cultivation Conditions And Cultivation Process Thereof To Sustain Manned Space Missions

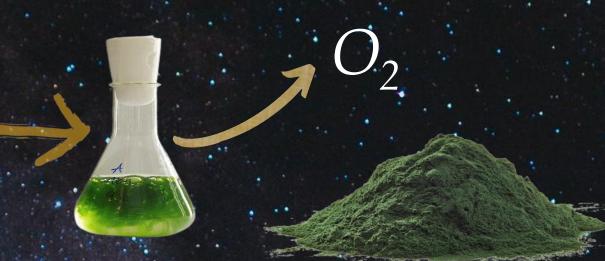
Inventors: Giacomo CAO, Alessandro CONCAS, Giacomo FAIS, Gilberto GABRIELLI, Alessia MANCA, Federico MICHELI, Antonella PANTALEO











Algal biomass

Pigments	Lipids	Proteins	Polysaccharides	Bioactive compounds	Biopolyesters
Chlorophylls Carotenoids Phycobilins	Polyunsatured fatty acids Hydrocarbons		Agar Alginates Cellulose	Various antibacterials Antiviral Antifungal Antialgal Anti protozoan	Poly- (hydroxyalkanoates)
Cosmetics Human nutrition Food technology Functional food Feeding Pharmaceutical Therapeutical	Pharmaceutical and Therapeutical Application Human nutrition Food Technology Functional food Energy creation Feeding	Human nutrition Food Technology Functional Food feeding	Human nutrition Food technology Functional food Pharmaceutical and Therapeutical application Energy Creation	Antibiotics	Green Plastics

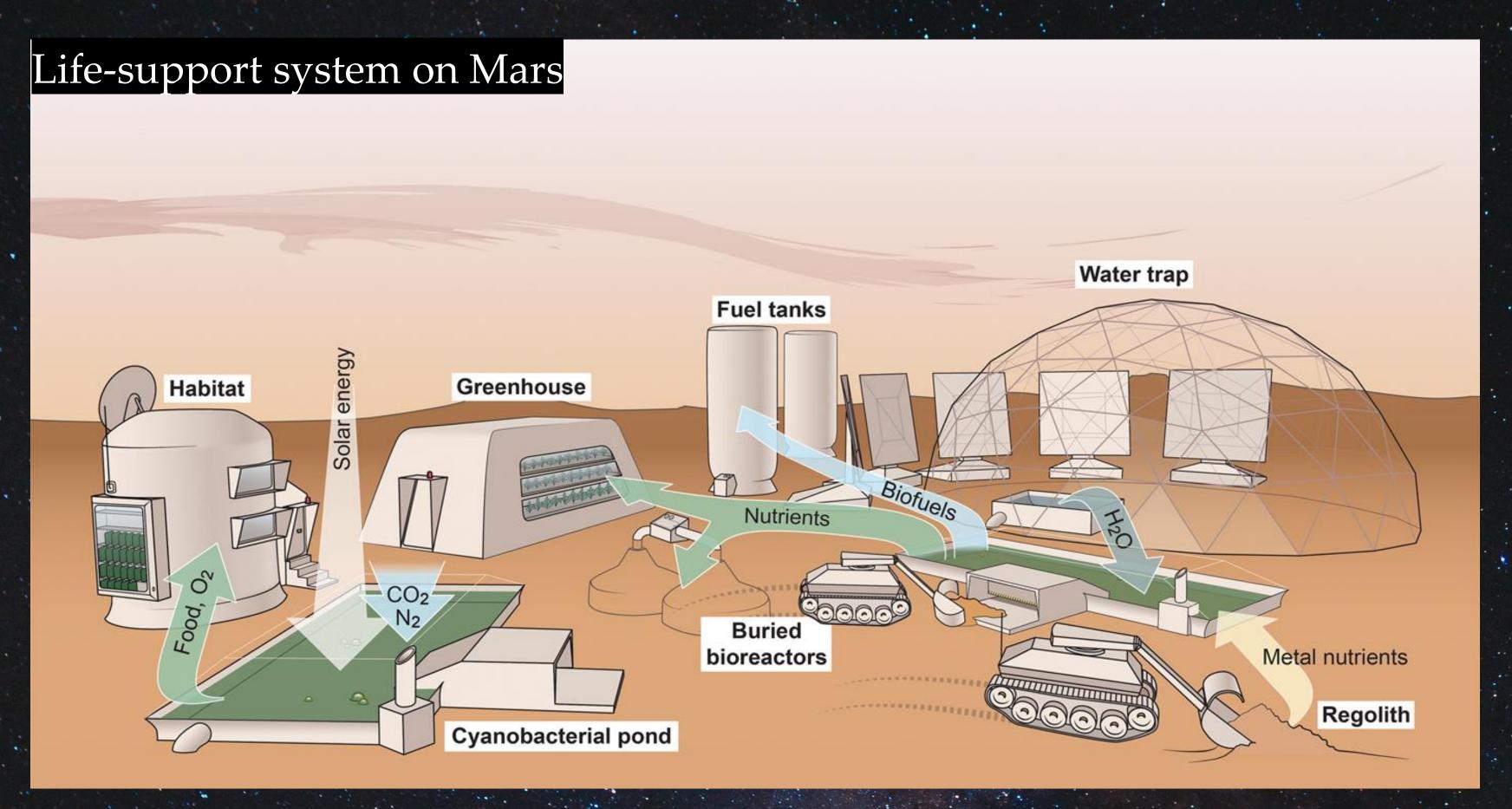
Who are the biggest investors?









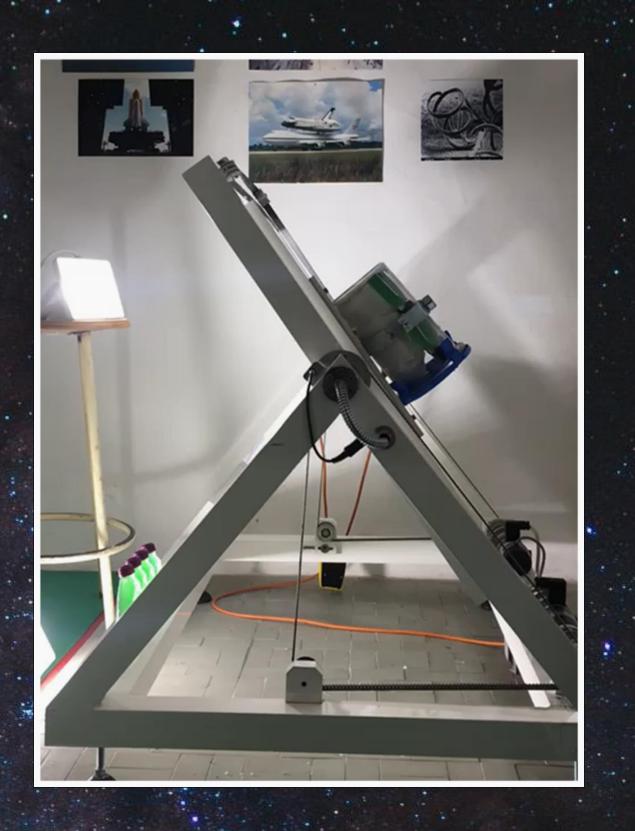


Artist's rendering of a cyanobacterium-based biological life-support system on Mars. Figure design: Cyprien Verseux and Sean McMahon (Yale University). Layout: Sean McMahon.

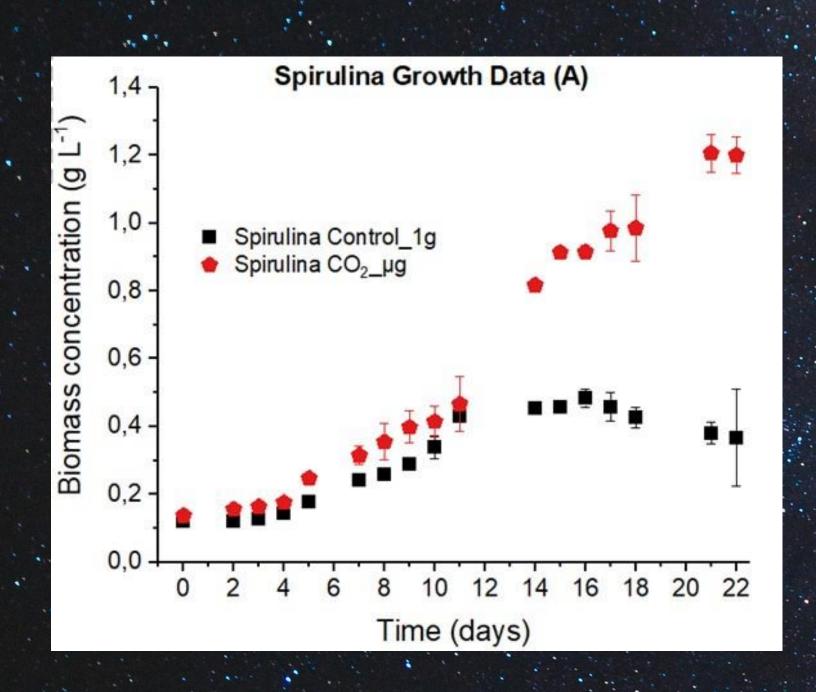
Microalgae cultivation under extreme condition of simulated microgravity and 100% CO₂ Human Urine Microgravity Food Leached regolith Spirulina

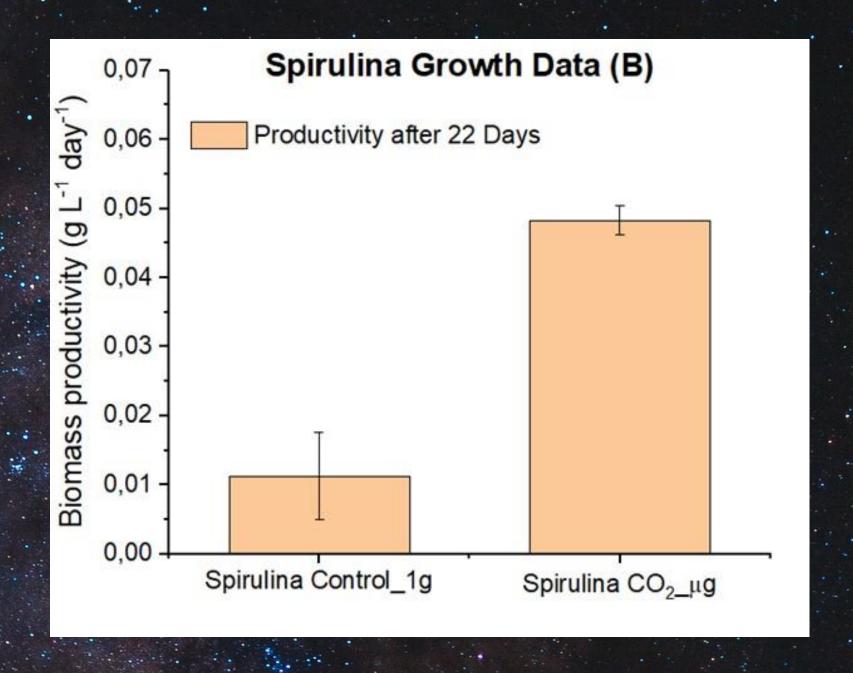
Simulating extra-terrestrial conditions on Earth

Random
Positioning
Machine



Biomass increases under extreme conditions!





Why our innovative activity might be useful?



To investigate technologies and mechanisms for the obtainment of biomass from algae in the framework of ISRU paradigm

To perform the screening of the most suitable algae to be sent into Space

Possible final users



Researchers



Industries



Astronauts

Our team and partner





Federico Micheli ToloGreen



Alessia Manca PhD. Student UNISS



Prof. Giacomo CAO UNICA, CRS4



Prof. Antonella PANTALEO UNISS.



Gilberto Gabrielli ToloGreen



Prof. Alessandro CONCAS
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Per aspera ad astra

Through Hardships To The Stars