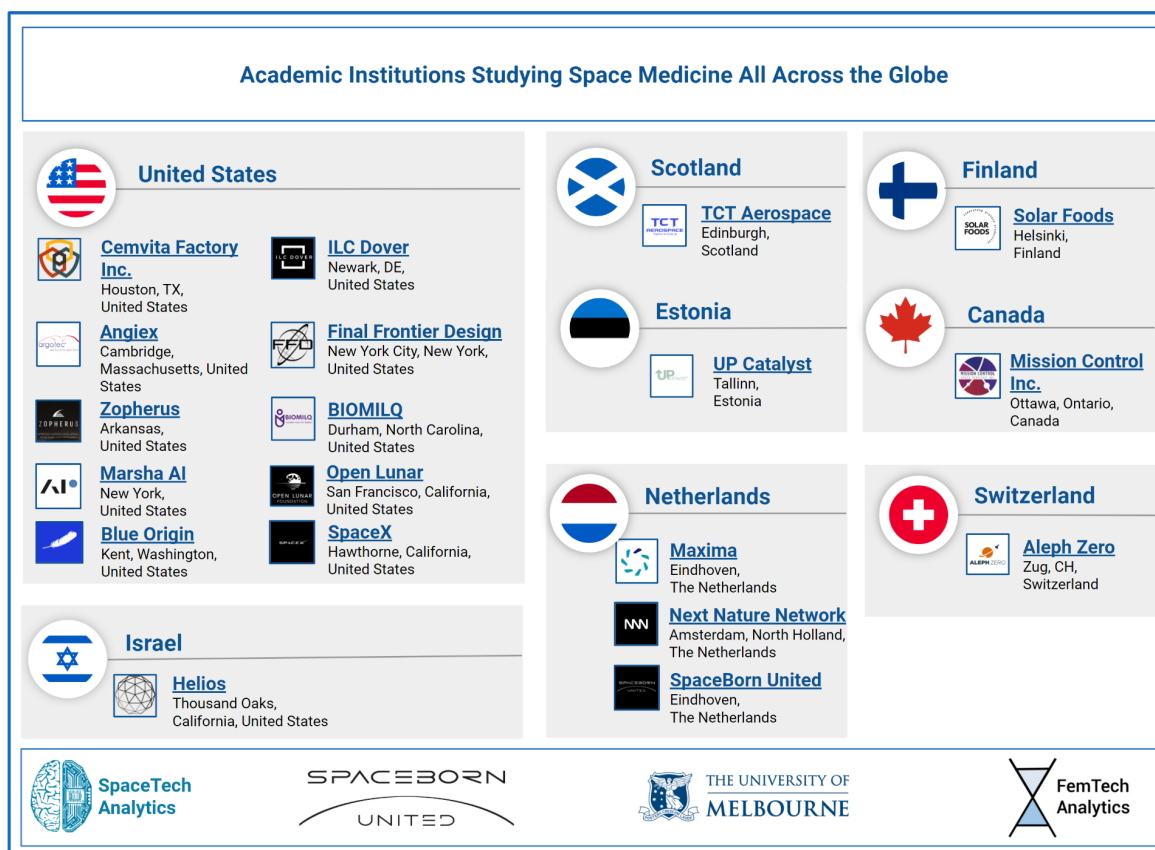


PRESS RELEASE

Giving Birth in Space Q3 2021

SpaceTech Analytics provides new approaches and insights into 20+ private companies aiming to solve challenges of human reproduction in space and astronaut health



September 10, 2021, London, UK: [SpaceTech Analytics](https://www.spacetechnalytics.com) in cooperation with [SpaceBorn United](https://www.spaceborn.com), – releases a joint, open-access, 85-page report **Giving Birth in Space Q3 2021** summarising key observations in the human reproduction in space, a rapidly evolving and exponentially growing industry. In this report, we have assembled information about key industry trends and created a comprehensive list of 50 Space Medicine-related R&D centres, 20+ leading private companies in the sphere of astronaut health in collaboration with 4 contributors. This report contains information about major approaches that are being developed for space settlement: women astronaut's health risks as well as key challenges for giving birth on extraterrestrial planets; age-related biomarkers; main approaches of risk mitigation; and the key trends in this area that help to improve astronauts' health and make the deep space exploration closer to reality.

Link to the Giving Birth in Space Report:

<https://www.spacetechnalytics.com/giving-birth-in-space-2021>

Currently, 42% of the companies solving issues of human reproduction and settlement in deep space have their headquarters in the United States, with the Netherlands in second

place (16% of all private companies). Other companies are distributed equally among Israel, Scotland, Finland, Estonia, and Canada.

The report offers an analysis of:

- Past experiences, current advancements, and future projections regarding giving birth in space. It appeared to be an extremely complicated topic requiring comprehensive analysis. The data gathered by NASA and other agencies for decades is not appropriate to make strong assumptions about the human ability to give birth on Mars. There are plenty of risks quite distinct from those professional astronauts are used to. Therefore, it requires completely new approaches to reach the goal of giving birth on Mars.
- Space Tech-related private BioTech, pharmaceutical, healthcare companies, as well as entities that are actively developing hardware scientific solutions for deep space exploration and human settlement on extraterrestrial planets; R&D Hubs and Associations; and the cooperation between them.
- Scientific and technological aiming to adverse newly arising questions of human well being in the harsh environments of extraterrestrial planets and the harmful effects of long-term spaceflight, as well as the ways in which humans can establish their habitats among the Earth. Modern unconventional approaches that are already solving space related disorders, helping patients on Earth, and those that are just gaining development, and ready for further research.
- Human Longevity in space and the treatment of some systemic disorders, highlighting their practitioner application for astronauts' recovery after spaceflight.
- Changes in the age-related targets and biomarkers in astronauts after short-term and long-term space flights.
- Trends and perspectives of the Human Space exploration and reproduction industry with comprehensive analysis of the main directions and unconventional approaches to improve human health in space and achieve long-term successful spaceflights.

Advances in longevity are crucial to the future of the space economy. In ideal conditions on Earth, the human body typically lives to 90 years or more until aging-associated diseases lead to its decay and death. With current technology, it would take a crewed mission roughly six months to reach Mars, eighteen months to the Asteroid Belt, and up to several years to the outer planets.

Given the current state of medical technologies, a multi-year journey to the nearest star system (let alone a multi-decade one) would probably not be survivable, even if we had propulsion technology to travel at large fractions of the speed of light. The interplanetary environment presents immensely difficult challenges: zero gravity weakens and wreaks havoc on all bodily systems; cosmic radiation damages cellular DNA; traveling any appreciable distance will result in decades of artificial aging.

Major takeaways from the report include the following:

- Today's era of commercial space flights and habitable Low-Earth Orbit predisposes is accelerating the pace and necessity of experiments and related data concerning living and procreating in gravity environments.

- In order to reach Mars, the human body may need new and extra care: gene therapy, reproductive assistance, radioprotectors, advanced biomedical technologies and treatments, to increase chances of successful births and lives on Mars. Terraforming Mars may be required to create a safe child-friendly environment (e.g. artificial magnetosphere to provide an atmosphere providing radiation protection and oxygen).
- Space radiation, weightlessness, and the Mars environment are hazardous factors for childbirth. Giving birth on Mars will become possible when all these factors are fully researched and resolved.
- Mars settlement brings plenty of risks (radiation and weightlessness are the most serious among them) that can harm women's health, fertility, and embryo. Although experiments on animals show that birth beyond Earth is possible, pregnancy during spaceflight is fraught with harmful consequences.

About SpaceTech Analytics

[SpaceTech Analytics](#) is a strategic analytics agency focused on markets in the Space Exploration, Spaceflight, Space Medicine, and Satellite Tech industries. Its range of activities includes research and analysis on major areas of high potential in the SpaceTech industry, maintaining profiling of companies and government agencies based on their innovation potential and business activity, and providing consulting and analytical services to advance the SpaceTech sector.

About SpaceBorn United

[SpaceBorn United](#) is the first biotech and mission development company that will safeguard human 'Seeds-of-Life' in space by 2021, make conception in space feasible by 2023 and enable real human birth in space by 2028.

For press and media inquiries, cooperation, collaboration, and strategic partnership proposals, please contact: info@spacetech.global

Oleksii Rud

Head of SpaceTech Analytics

or@dkv.global

Visit us on our social media platforms:

[LinkedIn](#)

[Facebook](#)

[Twitter](#)