

ASTRO RAD®

Shielding Astronauts from Spaceborne Radiation







Protection on par with
on-board storm shelter



Full mobility and enhanced
ergonomics



Enabler of deep-space
missions

- 
 In the event of a solar particle event, astronauts will be exposed to dangerously high dose rates
- 
 Through the technological breakthrough of selectively shielding sensitive organs and the stem cells within them, StemRad has made protection from spaceborne radiation possible
- 
 The AstroRad enables the astronaut to exit the storm shelter to perform important activities even in the midst of a solar storm
- 
 AstroRad Dramatically reduces Radiation Exposure Induced Death (REID) while eliminating the possibility of Acute Radiation Syndrome (ARS)



In Collaboration with
LOCKHEED MARTIN

www.stemrad.com

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Fully Compatible with Current Vehicle Architectures



Highly Effective Against Solar Particle Events (SPE)



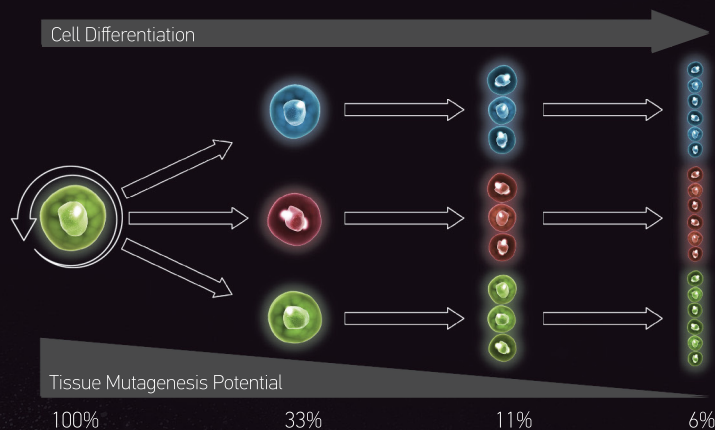
Payload Reduction Through Additive Manufacturing from Onboard Recyclables



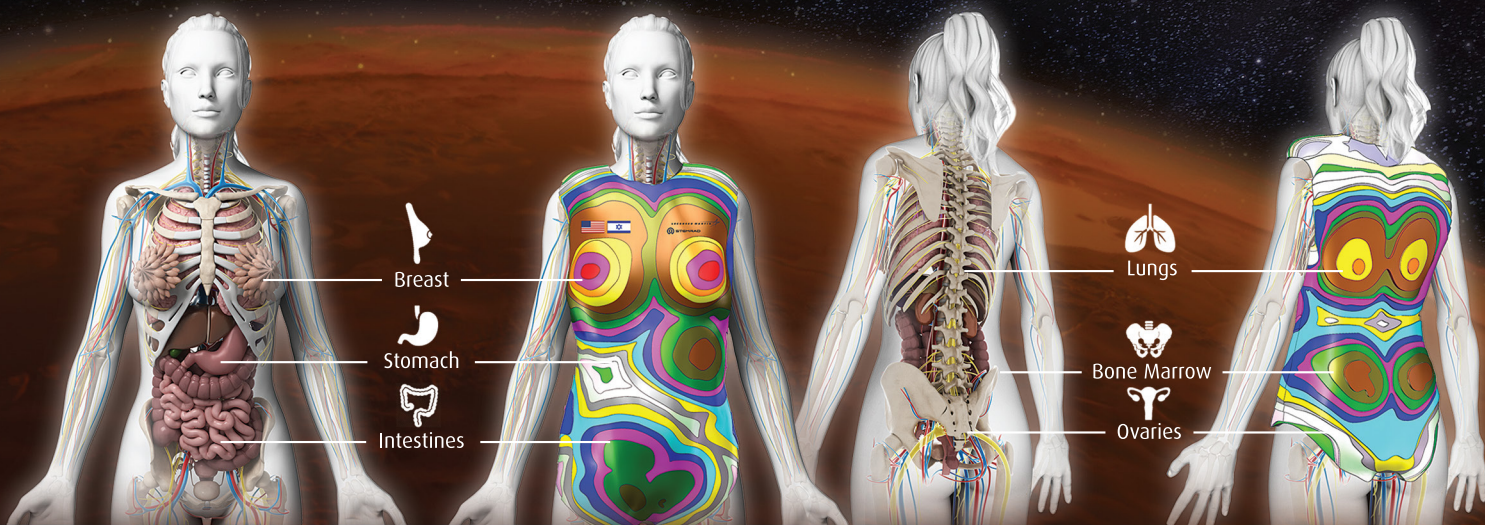
Advanced Ergonomics Enabling Long-Duration Use

Preventing Cancer through Enhanced Protection of Stem Cells

A mutated stem cell produces thousands of mutated daughter cells, exponentially increasing the likelihood of cancer. StemRad's smart shielding spares stem cells of radiation, dramatically reducing the number of mutated cells in an organ.



Proprietary Smart Shielding that Focuses Protection on the most Vulnerable Organs:



Manifested on Orion around the Moon:

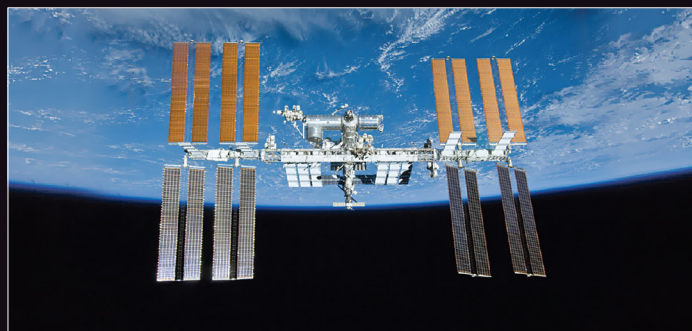


MARE

Matroshka AstroRad Radiation Experiment. A collaboration in deep space aboard Orion EM-1, between NASA, ESA and DLR.



Manifested on International Space Station:



ISS

Ergonomic Testing of AstroRad aboard ISS in 2019 (In Collaboration with Lockheed Martin and CASIS).

