



Off-World Science & Industry

Deleting gravity to unlock the next industrial revolution



Industry in Space, Abundance on Earth

NASA Summer Study 1975

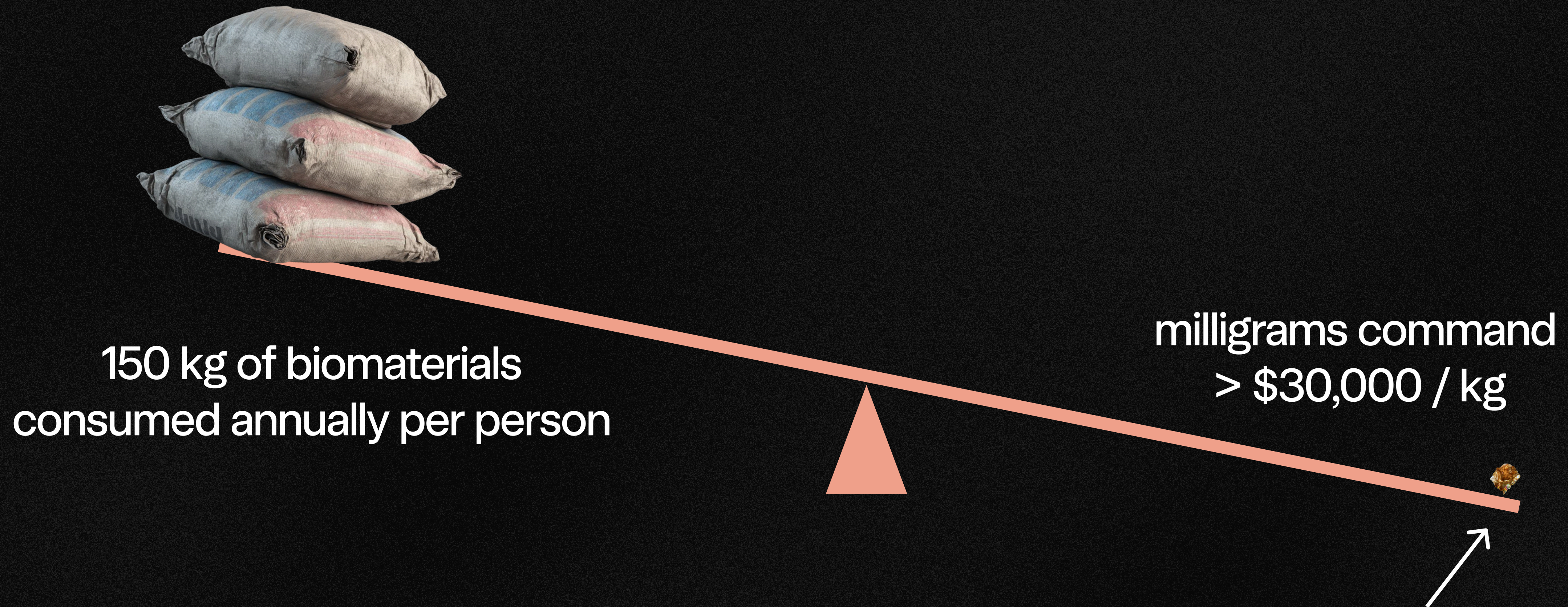


Helogen Corporation is leading the next industrial revolution by moving trillion-dollar industries off Earth

- Fully automated factories
- High-value biomaterials & fine chemicals
- Shifting resource intensive processes to carbon negative
- Secured commercial supply contracts



Specks unlock a mountain of value



Helogen Starts Here



Helogen's First Biomaterials

Helogen Biologic

Human Recombinant

Applications

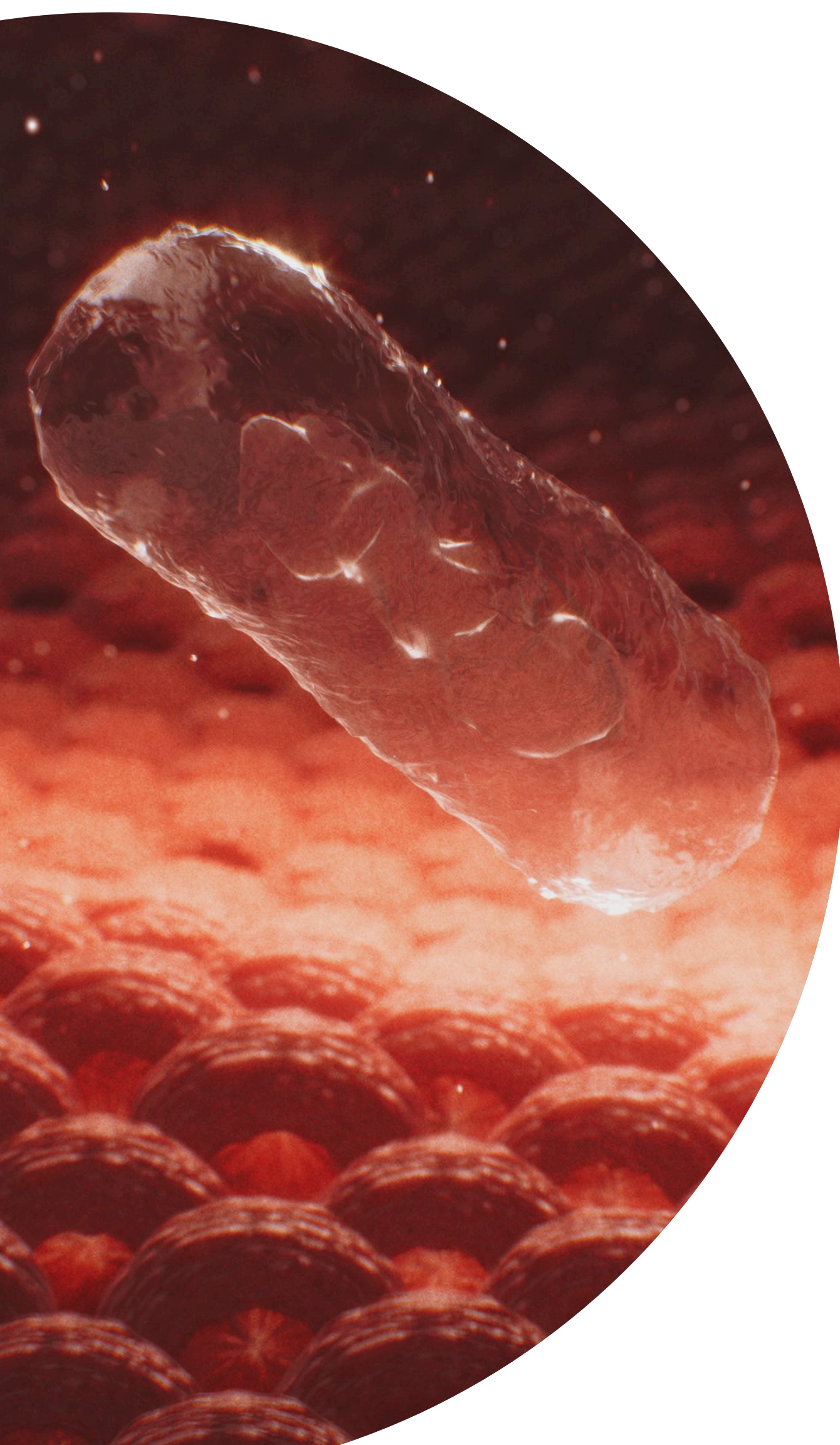
- Dermal Fillers, Wound Healing
- Cosmetics Ingredients
- Regenerative Implants
- Tissue print Mesh
- Lab Reagents

Helogen BNC

Nano-Mesh Biopolymer

Expanded Applications

- Tympanic patches (EU CE)
- Small-diameter vascular graft
- Neurosurgical wraps
- Bio-inks
- Bio Concrete - Regolith driven

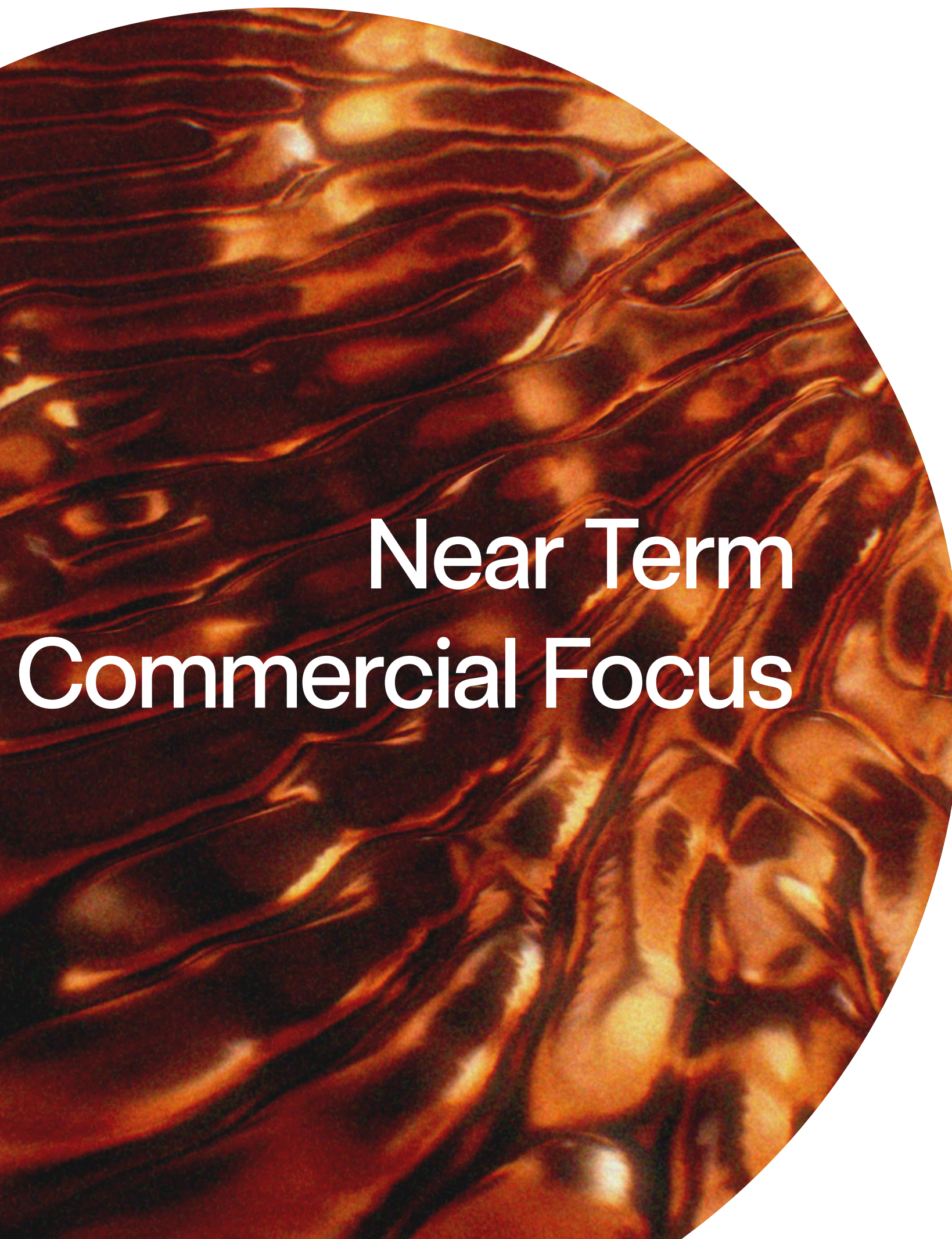


Market + Near Term Focus

Large global markets in health, regenerative medicine, wellness, & industrials

Target Materials

- **Recombinant biologics:** regenerative medicine, implants, aesthetics
- **Biopolymers:** biocompatible scaffolds, wound care
- **Fine Chemicals:** industrial, wellness applications



Near Term
Commercial Focus



Space = a new manufacturing environment

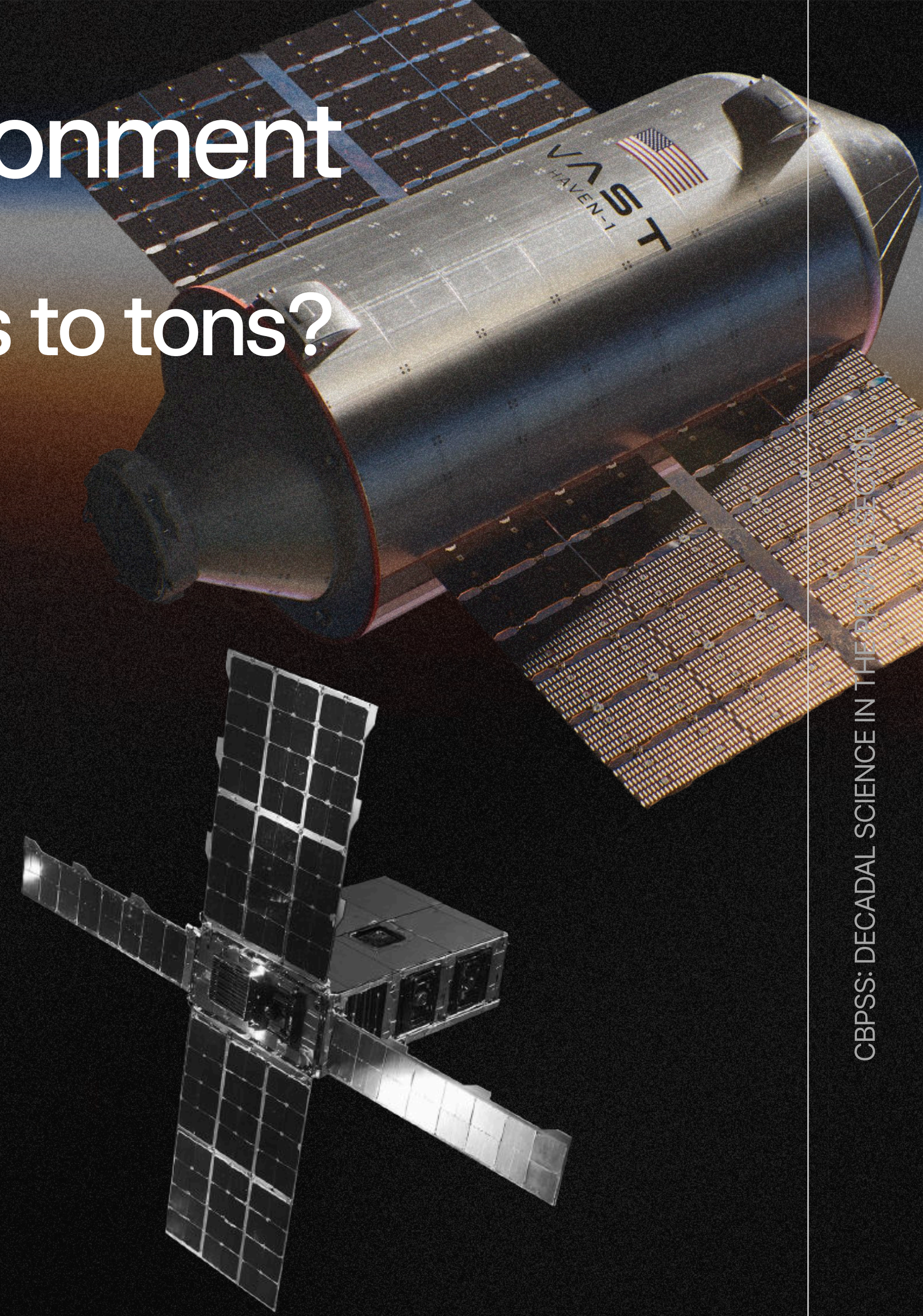
How do we scale from research to kilograms to tons?

Autonomous Material handling

Process Monitoring

cGMP compliance

Scale-up



Closed-Loop Biofoundry

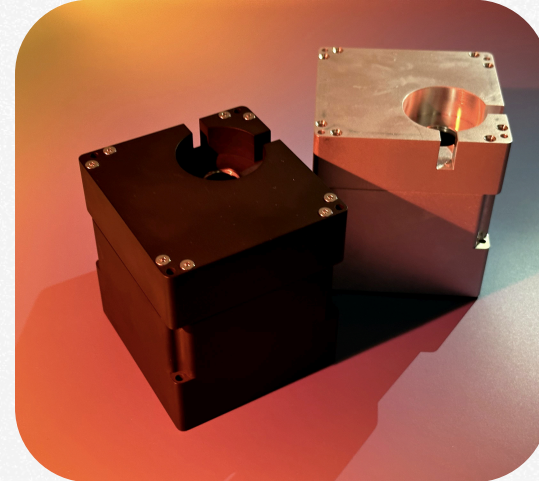
Factories that Learn in Orbit

CELS: Culturing + Treatment



First Flight
Spring 2026

Culture Analyzer



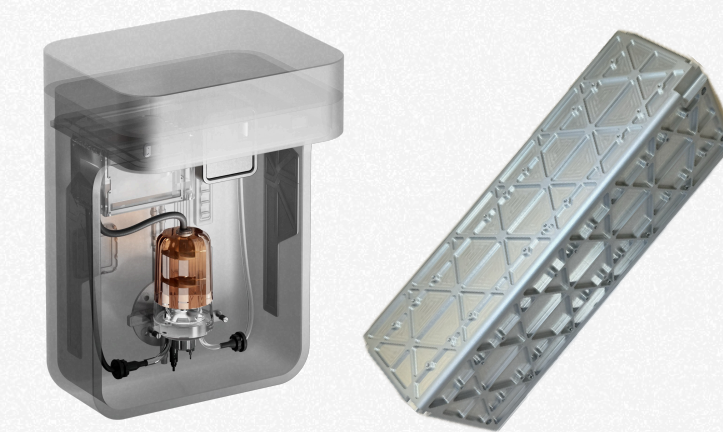
Space Heritage
Dec 2023

Culture Sequencer



Q1, Q2, Q3 2026
Multiple Launches

Bioreactor



Space Heritage
Dec 2023

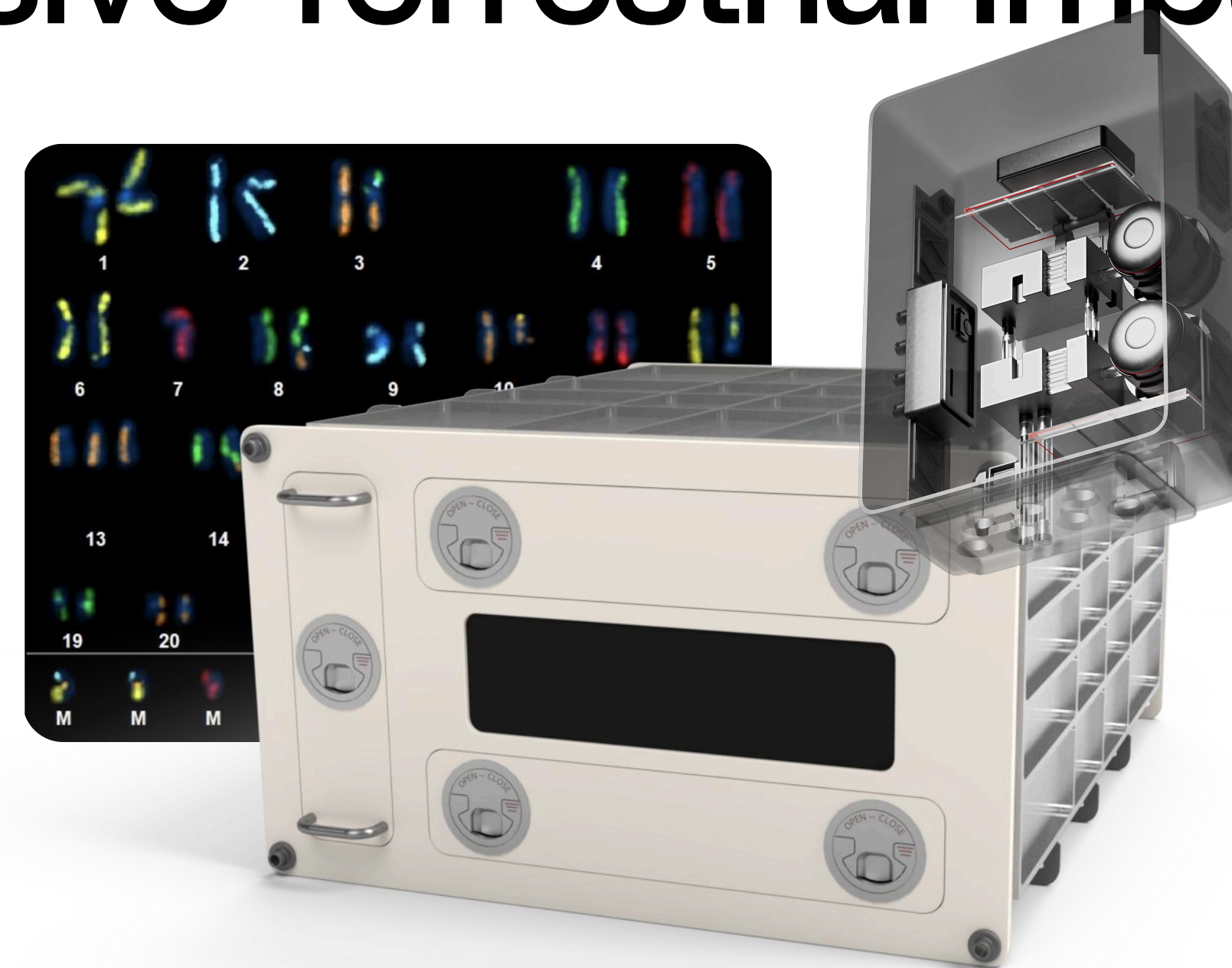
- Fully automated design – build – test – learn in orbit
- Culture, assay, sequencing, and optimization without crew intervention
- Each instrument we build serves both as manufacturing infrastructure and as a research platform for medical and space health studies



Space Breakthroughs, Massive Terrestrial Impact

The Multi-modal Culture Sequencer (MCS)

- Fully Autonomous
- Cassette Driven, hands off prep
- Genetic and transcriptomic sequences
- Real time compute for results in hours



Terrestrial point of care deployment

- Personalized Medicine in Space
- Anti-aging & longevity research
- Radiation Biology
- Immune System Monitoring
- Microbiome Shifts
- Drug Development
- Pathogen Detection and Microbial Monitoring

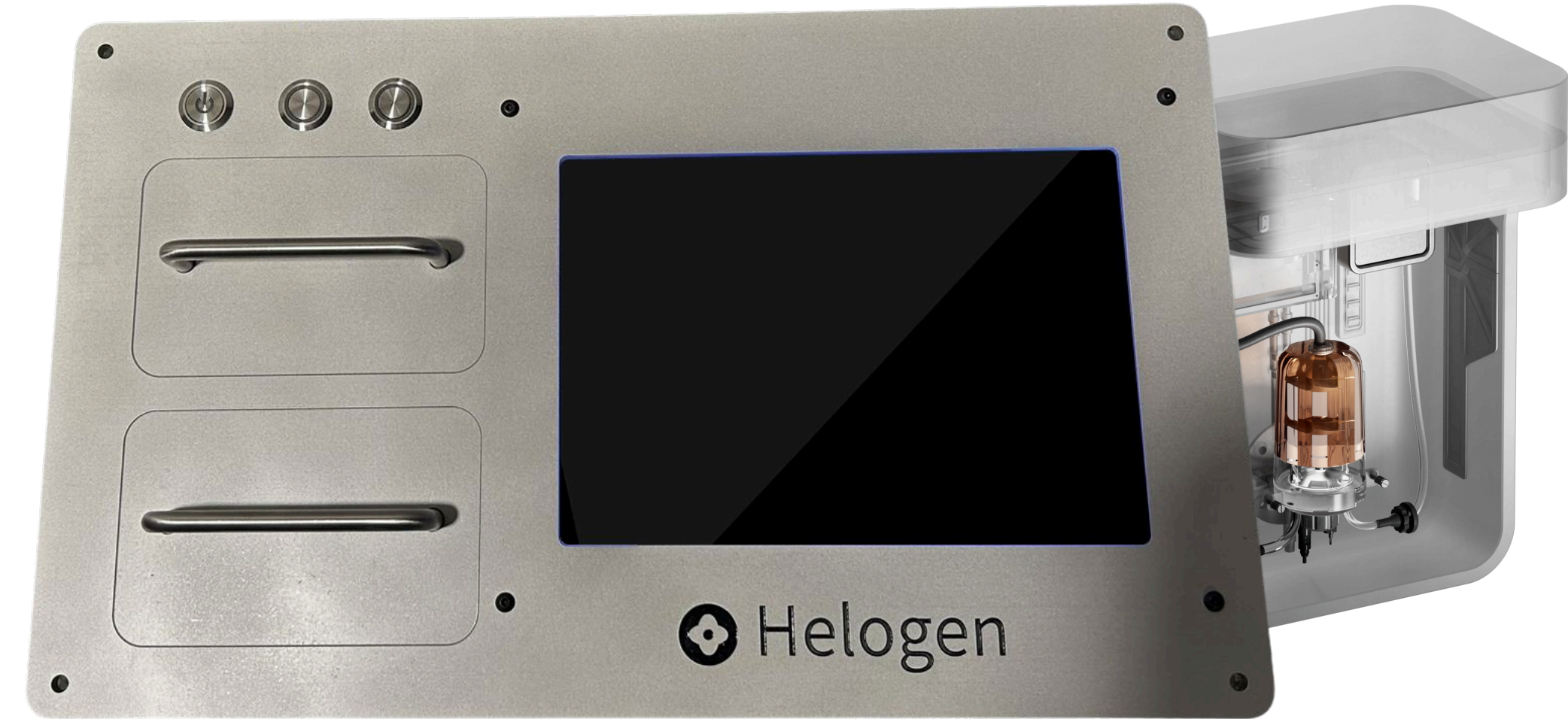


Memorial Sloan Kettering
Cancer Center™

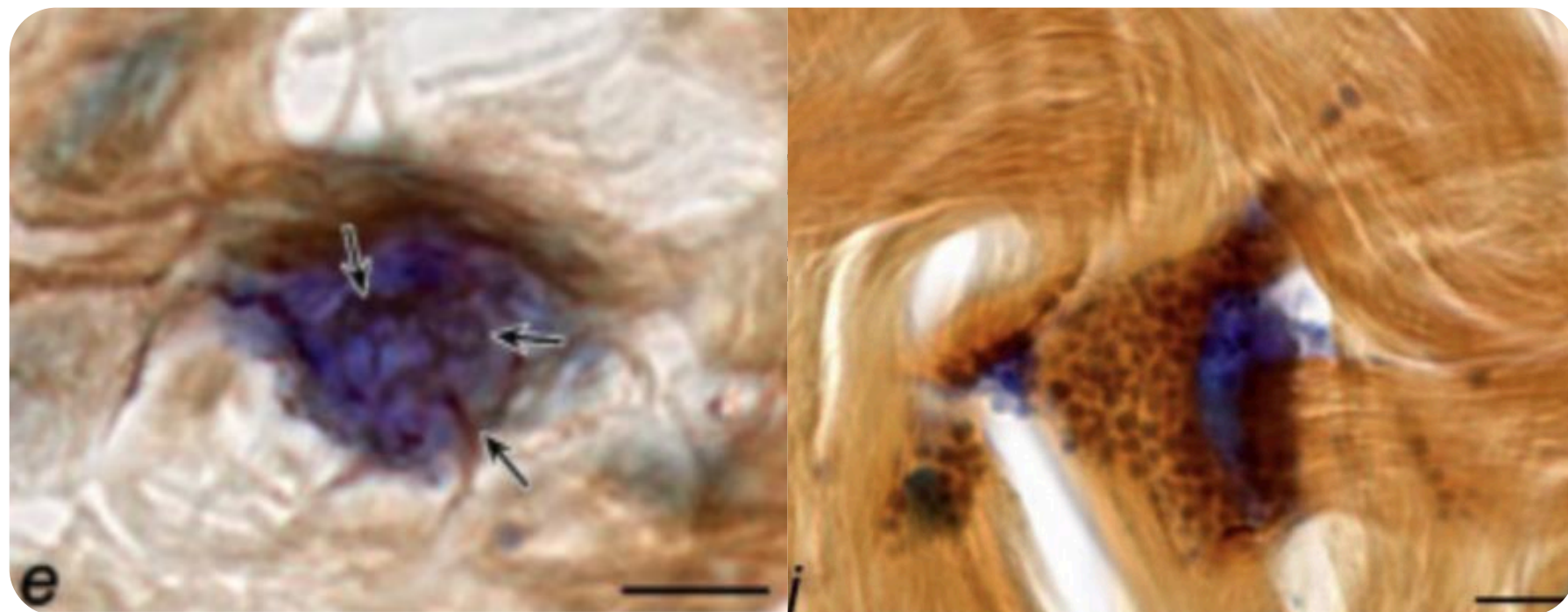


Helogen Bioreactor

- First mission grew muscle tissue
- Fully Autonomous
- Media exchange
- Constant monitoring



2026 is the year to Scale up



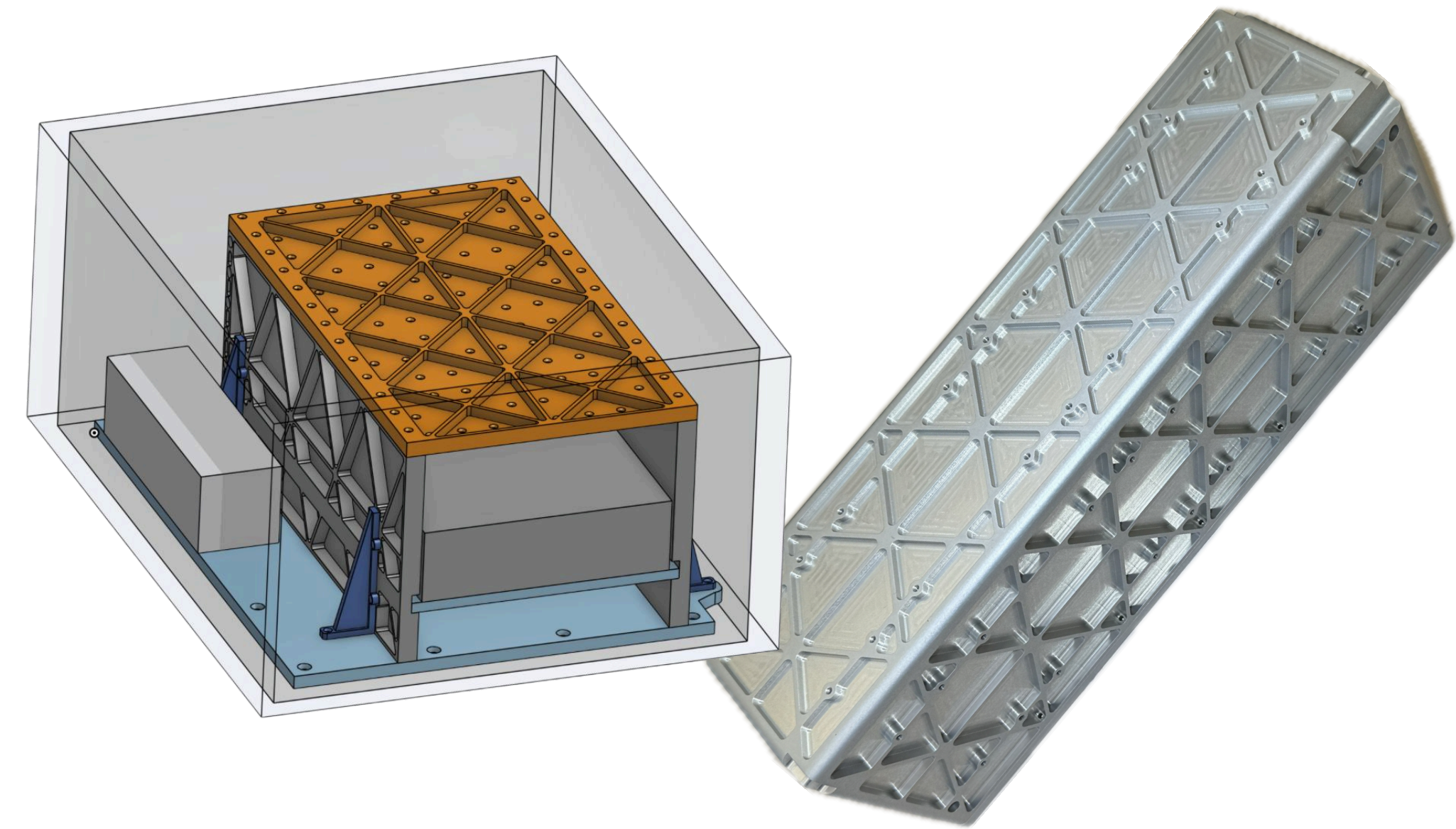
SOURCES: NASA MICROGRAVITY MATERIALS GUIDE, AMES RESEARCH CENTER, TANAKA ET AL., IJMSA 2024; STÜCKER ET AL., MCPHERSON & DELUCAS, NPJ MICROGRAVITY 2015

- Manufacturing High-Value Biomaterials
- Fundamental Biological Research
- Synthetic Biology Experiments
- Industrial Biotechnology
- Material Science
- Food & Nutrient Production
- Waste Recycling



CELS + Culture Analyzer

An autonomous, flexible platform for in-situ analysis of biological studies



- Techleap Prize
- Incubated Cell Stock
- Sample Prep & Treatment
- Sample Analysis
- Tissue systems & Organoids
- Casette Driven
- Environmental monitoring
- Imaging: Fluroscence + Spectrophotometry
- Subculturing → Treatment → Analysis

- Tissue / Organoid / Organ Development
- Cellular & Molecular Biology
- Physiology & Systems Biology
- Spaceflight-Specific Phenomena



Trusted by innovative science + space teams



HUMANS IN SPACE
CHALLENGE WINNER



NASA
TechLeap
PRIZE



Memorial Sloan Kettering
Cancer Center™

Medical R&D Mission



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BioMaterial Supply Contracts

L'ORÉAL

Fine Chemicals Supply



Payload + Infrastructure
Development Agreement



MERLN Institute



GINKGO

BIOWORKS



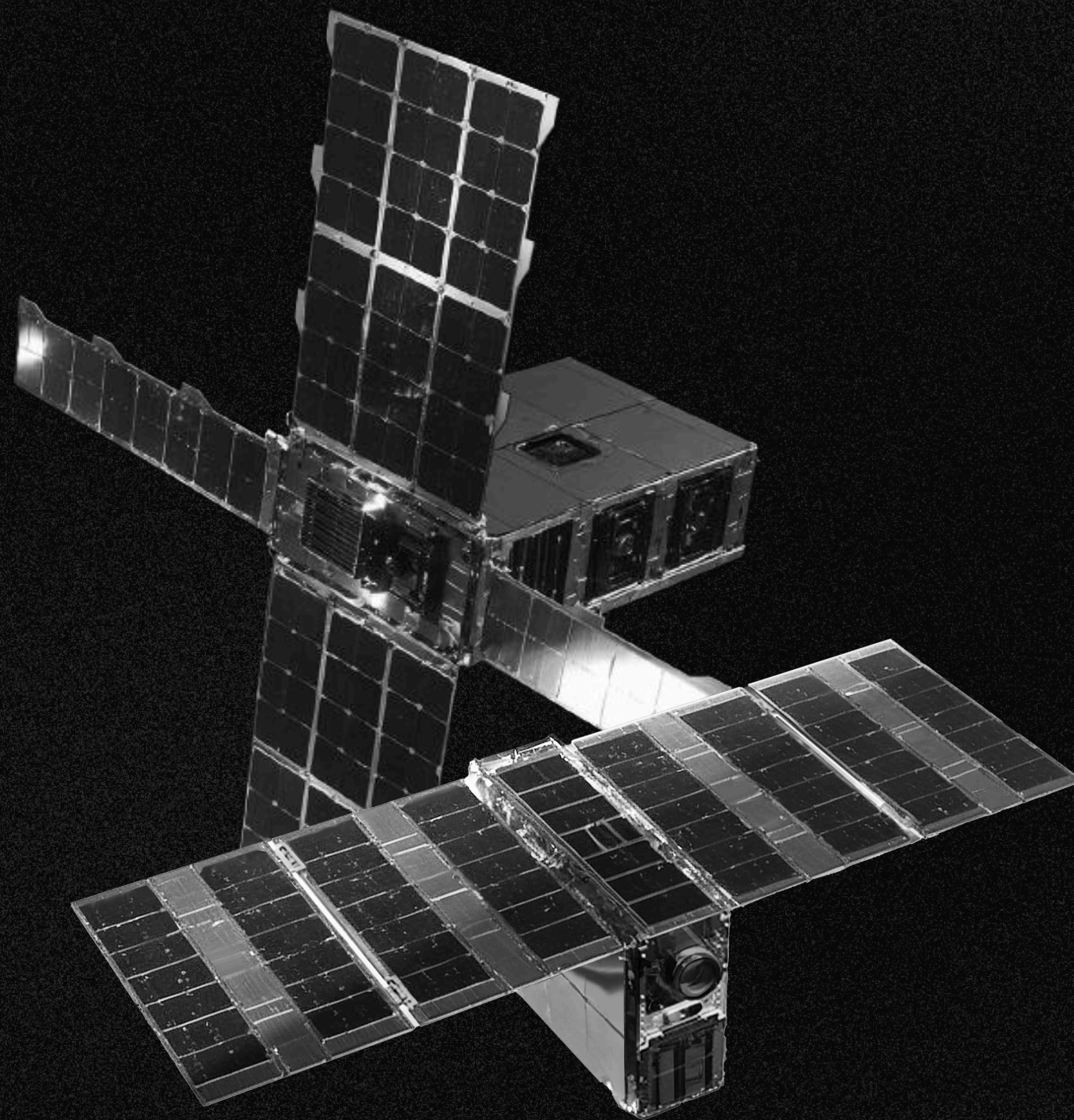
NOTRE
DAME

Research Partnerships



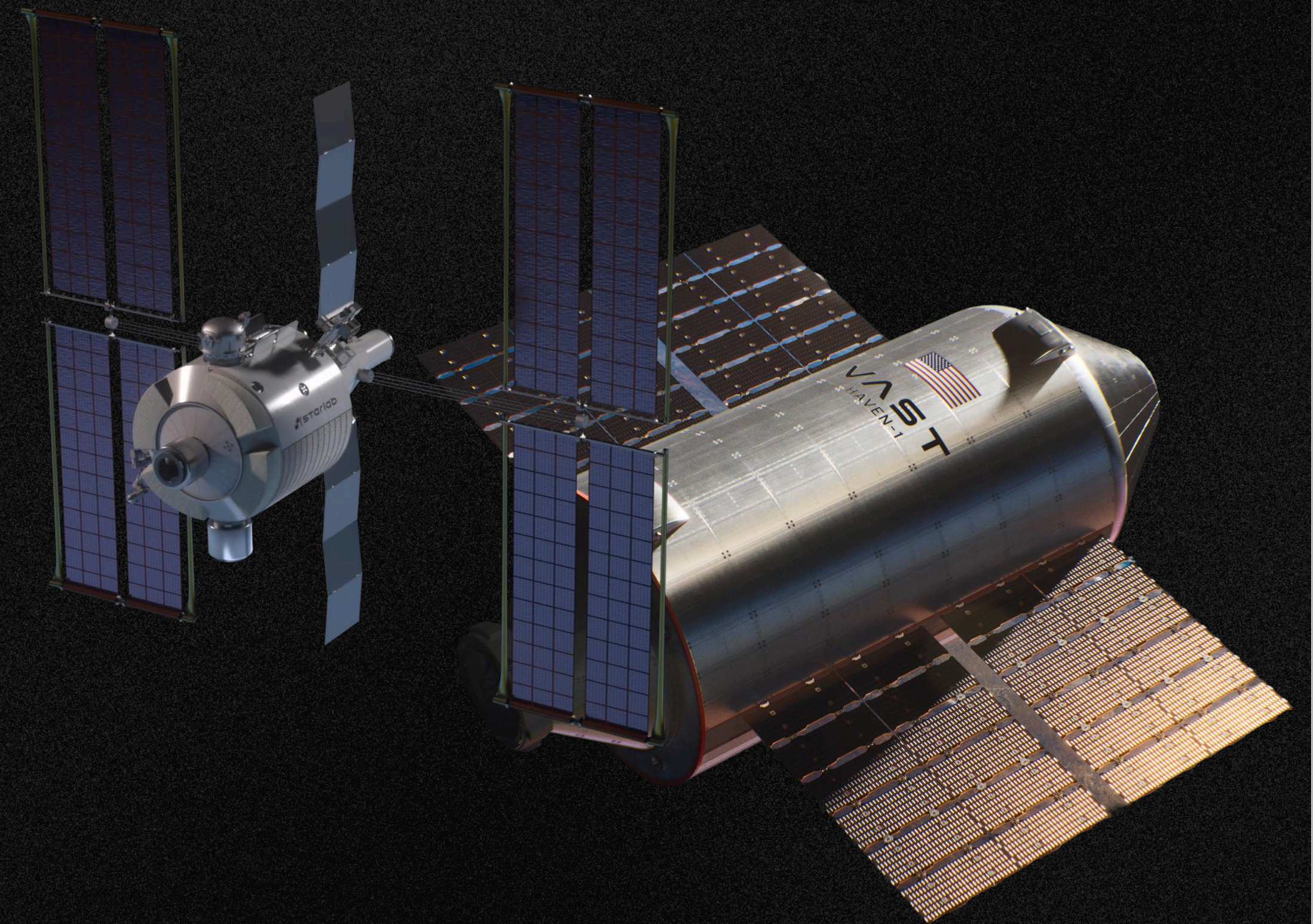
Path to Orbit

Fast Iterations
3–9 months to Orbit



Helogen Satellites

Scale, Downmass
8–15 months to Orbit



Stations



Research Missions

Turnkey Fee for Service

- Fastest orbital path
- You bring the science, we bring the rest
- Plug and play missions
- Multiple mission types:
 - Dedicated Freeflyers
 - Hosted Payloads
 - Station / Downmass

Academic / Research Partnerships

- Helogen may Subsidize costs
- Helogen maintains commercial rights
- Multiple fronts
 - Organoids
 - Tissue Engineering
 - Drug Development
 - Material Development
 - Biologics
- Support for grants



Helogen in Space

OSW Cazorla

- 2 independent payloads
- Nov 2023 SpaceX Transporter-9
- Built and launched in under a year
- Tissue Engineering
- Biosensors

HC-02-Conan

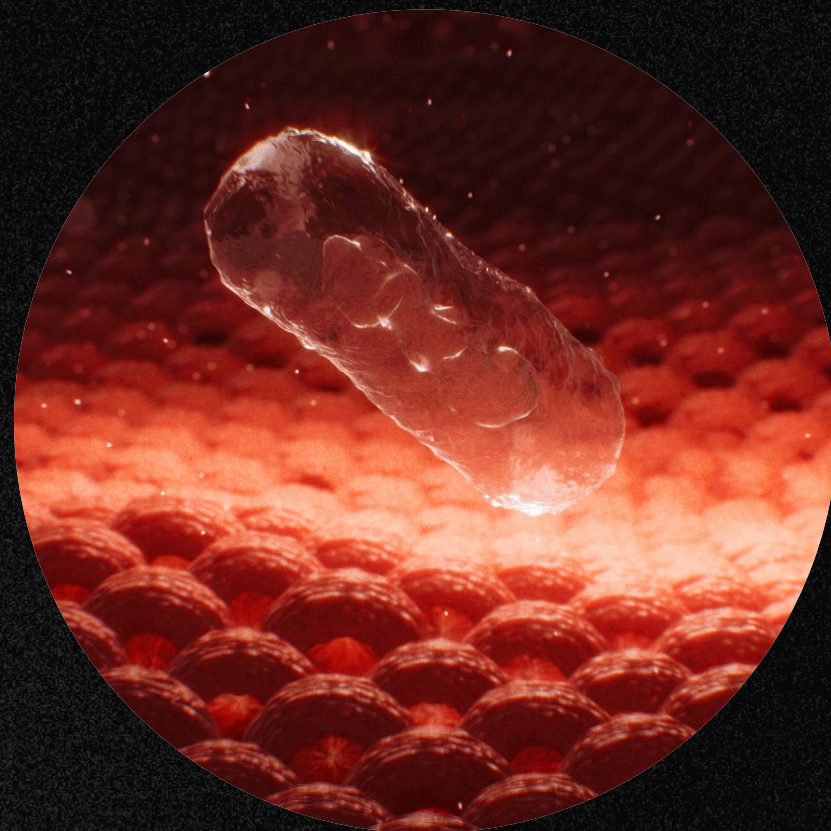
- Helogen Satellite
- Radiation Biology
- Material Science



Missions in Development Pipeline

Next Materials mission:

Ground-engineered strains tested in orbital bioreactors



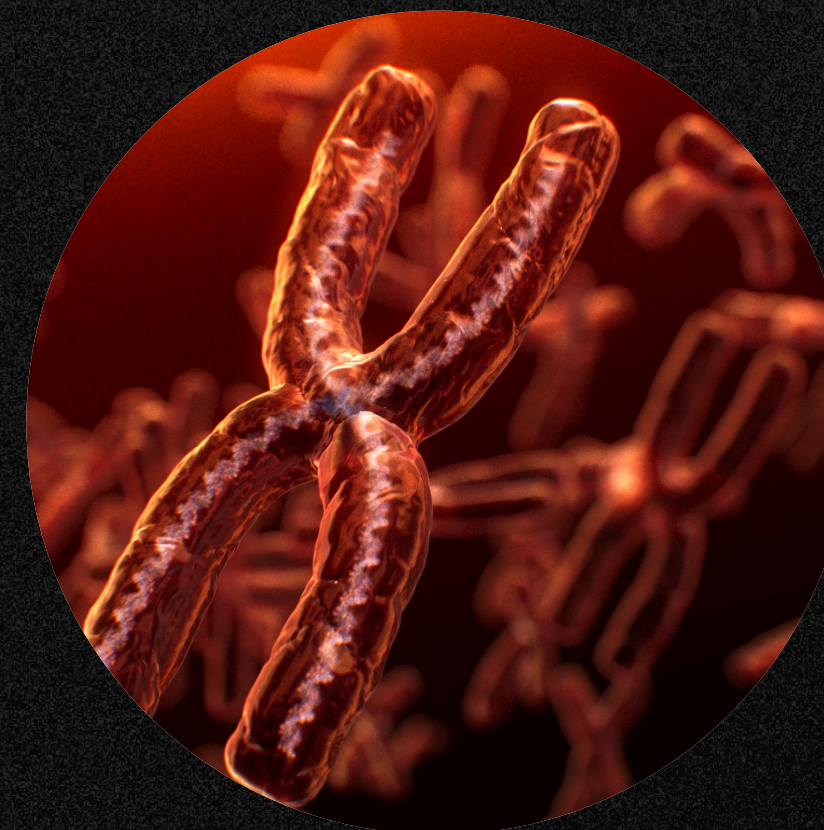
Q1 2026

- Biopolymer Iteration Module
- Recombinant Biologics Module
- Commercial fundamental research module



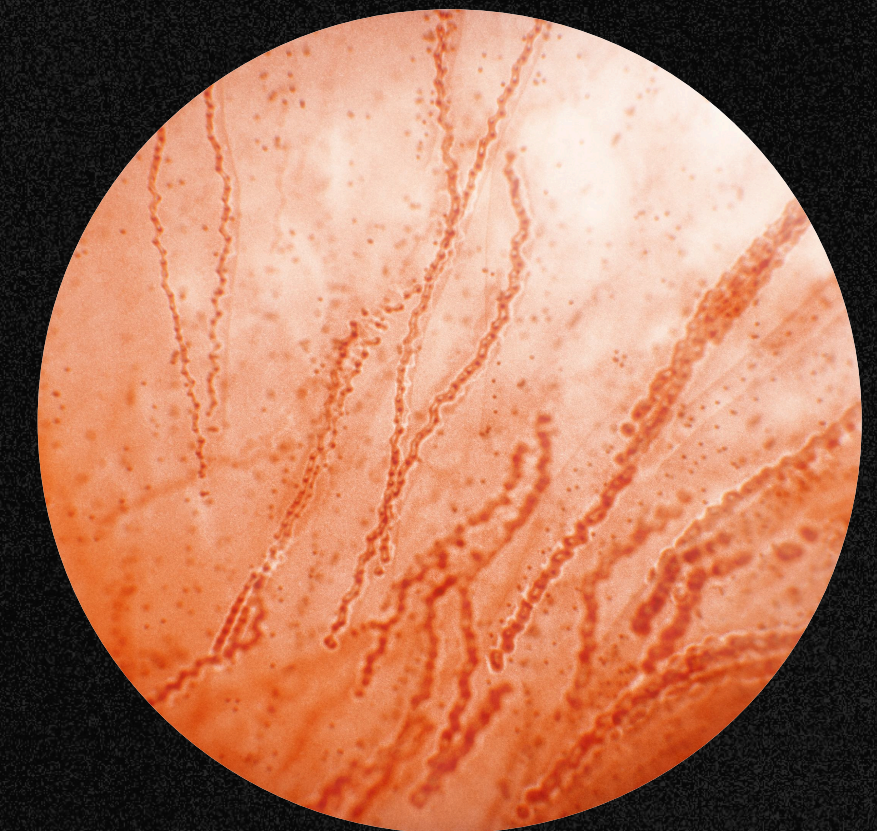
Q2 2026

- CELS TechLeap Launch
- Organoids in space



Q3 2026

- Commercial station launch (Sequencing)
- Biopolymer mission
- Organoids in space



Q4 2026

- ISS
- Starlab mission
- Recombinant Biologics



Deleting Gravity

Restoring Earth

Rewriting Industry



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