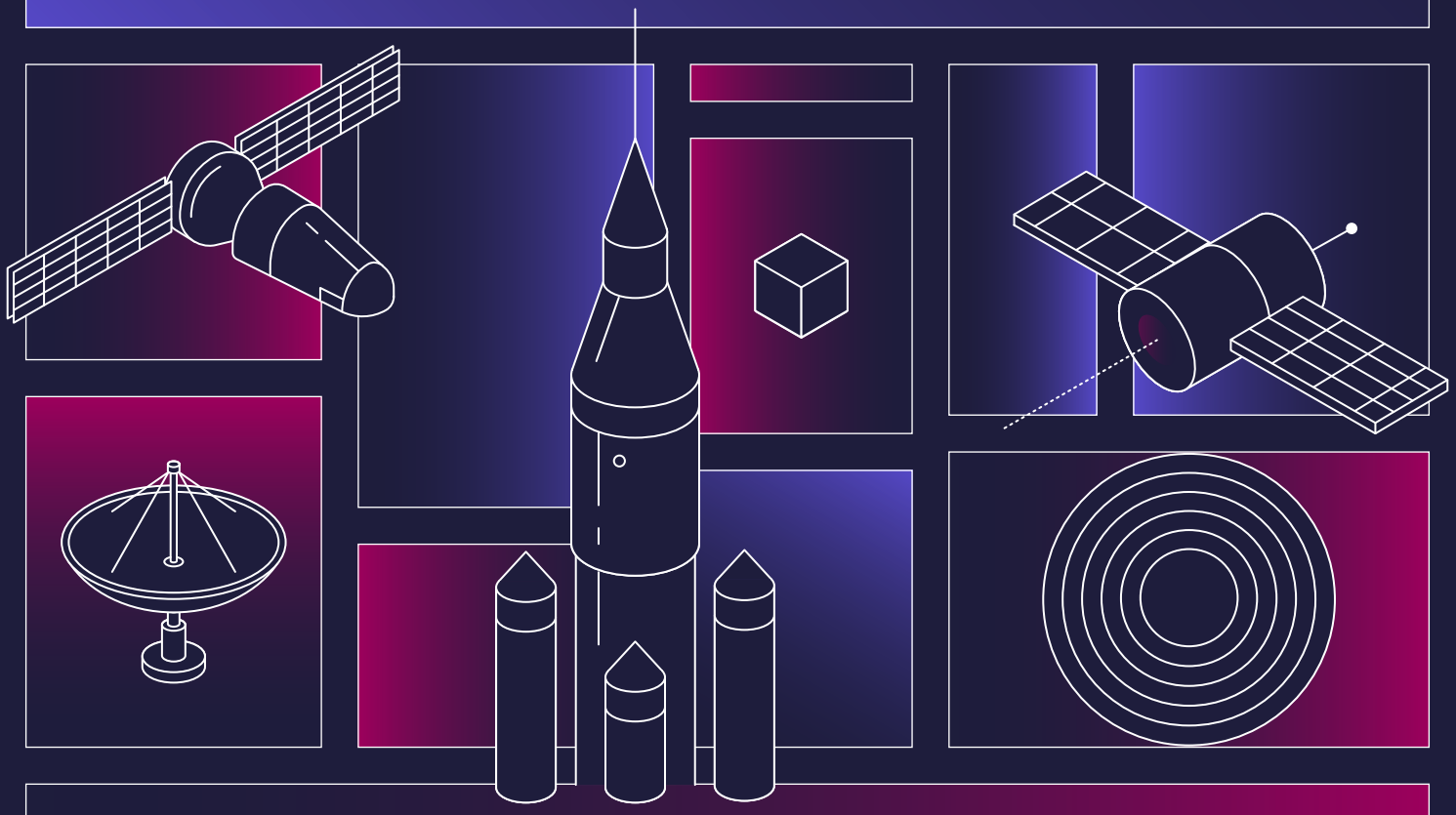
ATLANTIC SPACE HUB

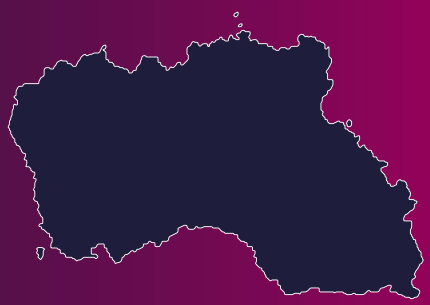
DESIGNING THE FUTURE OF SPACE 2026



JULY 22-25

ATLÂNTIDA CINE, VILA DO PORTO

SANTA MARIA, AZORES



PROGRAM

Scientific Committee

Afshin Beheshti, University of Pittsburgh
Rodrigo Coutinho de Almeida, European Space Agency

About the Meeting

General Objective

The meeting will convene international leaders in space biomedicine, engineering, and technology to discuss Santa Maria in the Azores as a premier Atlantic space hub for space exploration and research. The objective is to highlight the integration of life sciences and hardware systems in advancing human health, resilience, and mission success in space. By bringing together researchers, service providers, space agencies, and industry partners, the event will set the stage for collaborative projects that expand Europe's role in global space endeavors.

Topic Areas

Spaceflight Systems & Hardware

Next-generation spacecraft, payloads, launch systems, engineering solutions for microgravity research, and international collaboration.

Space Biomedicine, Human Psychology & Health

Effects of spaceflight on human physiology, biomedical countermeasures, AI-driven diagnostics, and translating space health research for clinical benefit on Earth.

Life at the Frontier: Quantum Biology, Biosignatures, Extremophiles, and the Art of Space

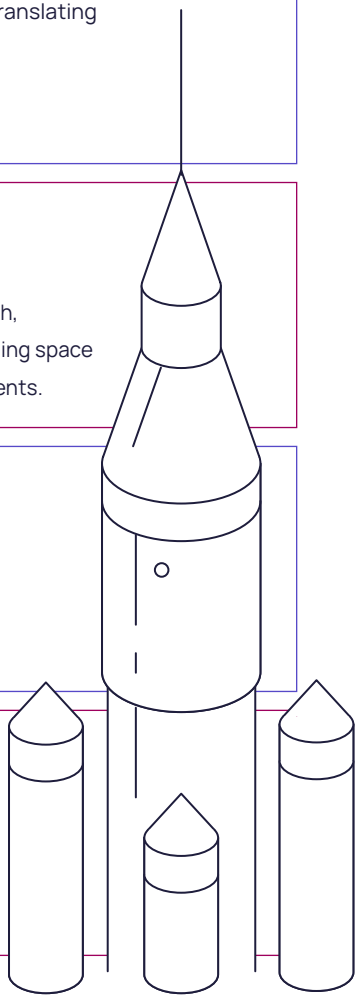
Exploring quantum biological phenomena and their intersection with space environments and human health, integrating the search for biosignatures and life beyond Earth, the role of art and creative outreach in bridging space research and payload design, and lessons from extremophiles and human adaptation in extreme environments.

Integration of Life Sciences and Engineering

Multi-omics, organoids, and microphysiological systems; linking biological insights with technology for mission resilience.

The Atlantic Space Hub Vision

Santa Maria as an Atlantic hub for space activities; building partnerships; policy, commercialization, and educational opportunities.



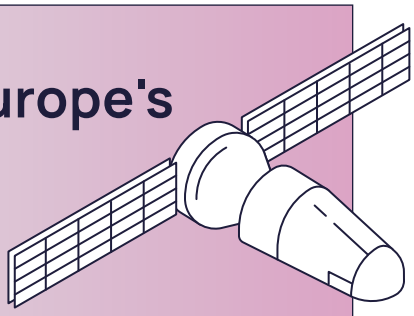
Program at a Glance

DATE

July 22

THEME

The Second Space Age: Europe's Atlantic Space Hub

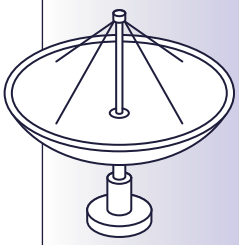


HIGHLIGHTS

Opening ceremony, Atlantic hub vision, institutional missions, spaceflight providers panel

DATE

July 23



THEME

The Next Frontier of Space Biomedicine

HIGHLIGHTS

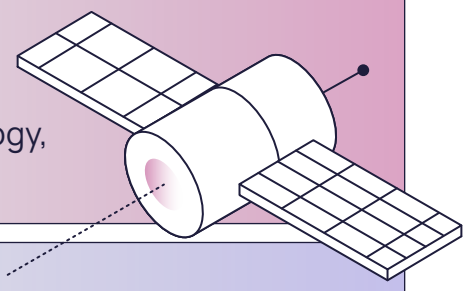
Space biology & genetics, AI/digital twins, astrobiology, biomedicine panels

DATE

July 24

THEME

Bridging Space Biology with Payload Providers

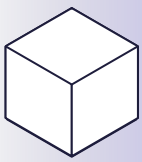


HIGHLIGHTS

Art & space, extremophiles, quantum biology, agency & industry panels

DATE

July 25



THEME

Astronauts' Day (Open to the Public)

HIGHLIGHTS

Astronaut talks, public engagement, community networking

DAY 1 — July 22, 2026

The Second Space Age: Europe's Atlantic Space Hub

9:30 — 10:00	**Registration**
10:00 — 10:30	**Opening Remarks** **José Manuel Bolieiro,** President of the Regional Government of the Azores (TBC) **Bárbara Chaves,** Vila do Porto Municipality (TBC) **Ricardo Conde,** Portuguese Space Agency
10:30 — 10:45	**Keynote Speech** **Angelique Van Ombergen,** ESA
10:45 — 11:45	**Vision for the Atlantic Space Hub** **Miguel Boavida,** Thales Portugal **Bruno Carvalho,** Atlantic Spaceport Consortium **Cinzia Cossu,** ESA **Inês d'Ávila,** Portuguese Space Agency

Overview of the evolving role of Santa Maria; current and future infrastructure, activities, and long-term goals. Strategic vision of Santa Maria as a European hub for global space collaboration.

11:45 — 12:00	**Coffee Break**
12:00 — 13:00	**Institutional Missions and Future Opportunities** **Moderator: Joan Alabart,** Portuguese Space Agency **Aldo Scaccia,** ESA **Ömer Ataş,** TÜBİTAK UZAY (Space Technologies Research Institute) **Fabio Caramelli,** ESA

Current institutional missions roadmap, integration with international partners, planned future expansions, and pipeline of upcoming experimental payload missions.

13:00 — 14:00	**Lunch**

DAY 1 — July 22, 2026

The Second Space Age: Europe's Atlantic Space Hub

Panel Session: Spaceflight Missions & Providers

14:00 — 15:30	**Rapid Provider Talks** **Sebastian Klaus,** ATMOS Space Cargo **Francesco Cacciatore,** Orbital Paradigm **Andrew Bacon,** Space Forge **Dana Levin,** VAST **Pearly Pandya,** AXIOM Space **Manwei Chan,** Voyager Space **Piotr Krol,** Space Forest

Each participant delivers a focused 10-minute presentation covering organization overview, core capabilities, unique value proposition, and opportunities for collaboration.

15:30 — 16:30	**Panel: Enabling the Next Generation of Space Research** **Moderator: Inês d'Ávila,** Portuguese Space Agency **Sebastian Klaus,** ATMOS Space Cargo **Francesco Cacciatore,** Orbital Paradigm **Andrew Bacon,** Space Forge **Dana Levin,** VAST **Pearly Pandya,** AXIOM Space **Manwei Chan,** Voyager Space **Piotr Krol,** Space Forest

A discussion on how the rapidly evolving commercial space ecosystem enables the next generation of research and innovation. Focus on lowering barriers to entry, improving payload integration workflows, and building scalable systems supporting both commercial and academic research.

16:30 — 17:30	**Cocktail Hour & Networking Reception**

DAY 2 — July 23, 2026

The Next Frontier of Space Biomedicine: From the Cosmos to the Clinic

9:45 — 10:00	**Keynote Speech** Cristovão Sousa, GIMM
10:00 — 11:00	**The Impact of Space on Human Biology and Genetics** **JangKeun Kim,** Weill Cornell Medicine **Edson Oliveira,** CEMA/FMUL **Joseph Borg,** University of Malta **Emmanuel Urquieta,** Universaty of Central Florida **Ronald Poropatich,** University of Pittsburgh

Spaceflight effects on the human body, multi-omics discoveries, and translation to clinical medicine.

11:00 — 11:15	**Coffee Break**
11:15 — 12:00	**Digital Biology in Space: Organoids, Omics, and AI-Driven Medical Twins** **Moderator: Afshin Beheshti,** University of Pittsburgh **Sylvain Costes,** University of Pittsburgh **Diego Galeano,** National University of Asuncion **Mary Helen Barcellos-Hoff,** University of California, San Francisco **Stefania Giacomello,** SciLifeLab, Sweden

Advances in predictive models, AI integration, and real-time diagnostics for astronauts.

12:00 — 13:00	**Life Beyond Earth: The Search for Biosignatures** **Moderator: Zita Martins,** IST **Lena Noack,** Freie Universität Berlin **Marta Cortesão, IA/CAUP** **Rodrigo Coutinho de Almeida,** European Space Agency **Zita Martins,** IST

Astrobiology, planetary exploration, and implications for human health sciences.

13:00 — 14:00	**Lunch**

DAY 2 — July 23, 2026

The Next Frontier of Space Biomedicine: From the Cosmos to the Clinic

Panel Sessions: Space Biomedicine and Benefits to Earth

14:00 — 14:50	**Panel 1: Human Health in Space and on Earth – From Mechanisms to Countermeasures** **Moderator: Afshin Beheshti,** University of Pittsburgh **Jonathan Schisler,** UNC Chapel Hill **Matthew Gilliham,** University of Adelaide **Pedro Quinteiro,** Universidade Lusófona **Lonnie Peterson,** MIT **Yasutaka Ikeda,** Otsuka

Examining how the space environment impacts overall human health and accelerates disease-relevant processes. Topics span cardiovascular, immune, metabolic, neurological, and musculoskeletal health, with mitochondrial dysfunction highlighted as a central mechanistic driver.

14:50 — 15:40	**Panel 2: AI, Multi-Omics, and Digital Twins for Precision Space Medicine** **Moderators: Beheshti & Almeida** **Charles Vanderburg,** Broad Institute/ MIT/ Harvard **Masafumi Muratani,** University of Tsukuba **Aline Martins,** University of California, San Diego **Ciro Leonardo Pierri,** University of Bari

Exploring how AI/ML and multi-omics integration are transforming space biomedicine into a predictive science and how digital twins of astronauts and patients can enable real-time health monitoring and personalized countermeasure development.

15:40 — 16:30	**Panel 3: Regenerative Medicine and Tissue Engineering in Space** **Moderator: Rodrigo Coutinho de Almeida,** European Space Agency **Stefania Giacomello,** SciLifeLab, Sweden **Sylvain Costes,** University of Pittsburgh **Nandu Goswami,** Mohammed Bin Rashid University of Medicine and Health Sciences **Robert Schwartz,** Weill Cornell Medicine

Examining how microgravity enables novel advances in tissue engineering, stem cell biology, and regenerative medicine, with direct applications for regenerative therapies on Earth.

16:30 — 16:45	**Keynote Speech** Lisa Carnell, NASA
16:45 – 17:45	**Cocktail Hour & Networking Reception**

DAY 3 — July 24, 2026

Bridging Space Biology with Payload Providers

9:30 — 10:00	**Keynote Speech** **Yasutaka Ikeda,** Otsuka
10:00 — 11:00	**From Art to the Origins of Life: New Perspectives for Space Exploration** **Moderator: Hermínia Saraiva,** Portuguese Space Agency **Bruce Damer,** Biota Institute & UC Santa Cruz **Rich Pell,** Carnegie Mellon/ The Center for PostNatural History

How art can directly bridge the gap between space research and payload design; creative approaches to space biology, ethics, and human survival.

11:00 — 12:00	**Extremophiles and Human Adaptation** **Moderator: Hugo Costa,** Portuguese Space Agency **Clarice D. Aiello,** Quantum Biology Ecosystem **Joan Alabart,** Portuguese Space Agency **João Lousada,** GMV **Jason Podrabsky,** Oregon State University

How studying life in extreme environments informs hardware design and human resilience.

12:00 — 13:00	**Funding National Research for Space Exploration** **Moderator: Joan Alabart,** Portuguese Space Agency **Pedro Quinteiro,** Universidade Lusófona **Dulce Oliveira,** INEGI **Rodrigo Ventura,** IST (TBC) **Hugo Gamboa,** FCT-UNL

An emerging topic exploring the intersection of quantum biological phenomena with space environments and human health.

13:00 — 14:00	**Lunch**

DAY 3 — July 24, 2026

Bridging Space Biology with Payload Providers

Panel Sessions: Institutional & Industry Perspectives

14:00 — 14:40	**Panel 1: Global Space Agency Strategies for Human Health and Life Sciences** **Moderator: Hugo Costa,** Portuguese Space Agency **Angelique Van Ombergen,** ESA **Enrico Cavallini,** ASI (Italian Space Agency)

Bringing together representatives from major global space agencies to discuss strategic priorities for human health and life sciences, with a focus on the post-ISS era, international collaboration, funding mechanisms, and enabling impactful translational research.

14:40 — 15:20	**Panel 2: Commercial Platforms and Payload Integration for Space Biomedicine** **Moderator: Joan Alabart,** Portuguese Space Agency **Pearly Pandya,** AXIOM Space **Cesare Lobascio,** TASI **Michelle Balsamo,** Kayser Italia **Manwei Chan,** Voyager Space **Dana Levin,** VAST **Sandro Pereira,** Exobiosphere **Miguel Ferreira,** Space Applications/ Ice Cubes

Examining the rapidly expanding role of commercial space companies in enabling life sciences research access, with a focus on challenges in payload design, integration, and execution.

15:20 — 16:00	**Connecting the Dots: The Conference in Review** **Hugo André Costa,** Portuguese Space Agency **Afshin Beheshti,** University of Pittsburgh **Rodrigo Coutinho de Almeida,** European Space Agency

Addressing the critical challenge of translating biological discoveries into deployable flight hardware. Focus on accelerating timelines, improving validation pipelines, and aligning biological research with engineering and mission constraints.

16:00 — 16:30	**Closing Remarks** **Ricardo Conde,** Portuguese Space Agency
18:00	**Conference Dinner**

DAY 4 I July 25, 2026 (Saturday)

Astronauts' Day — Open to the Public

How space makes a big difference for Earth

10:00 — 11:00	**Lessons from Spaceflight Biology** **Kate Rubins,** Former NASA Astronaut

Lessons from spaceflight biology for human health and beyond.

11:00 — 12:00	**The Future of Space Health & the Commercial Sector** **Tuva Cihangir Atasever,** Turkish Astronaut

Private spaceflight, astronaut health, and expanding commercial opportunities.

12:00 — 13:00	**Astronaut Talk** **Matthias Maurer,** ESA

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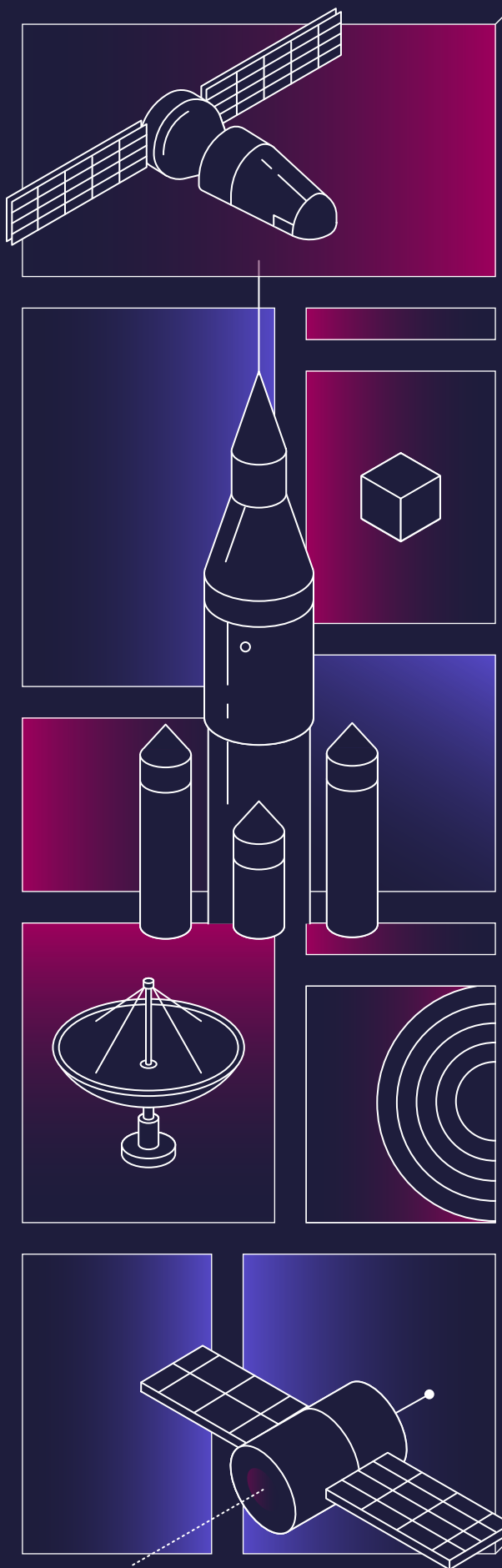

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