

# THESEUS

## Towards Human Exploration of Space: a European Strategy

### SETTING THE STAGE FOR HUMAN SPACE EXPLORATION

Space is full of endless possibilities; 40 years of human space flight has shown that humans can survive and work in space.

However, despite existing ESA or NASA studies or roadmaps, today Europe has no scientific and industrial roadmap for human space exploration. The THESEUS objective is to develop an integrated life sciences research roadmap enabling European human space exploration in synergy with ESA, taking advantage of the European expertise and identifying the potential of non space applications, dual research and development.

The project will both identify disciplinary research priorities and focus on fields with high terrestrial application potential, whilst also building a European network as the core of such a strategy.

The objective will be achieved by setting-up and coordinating 15 groups of European and international experts, ensuring that complementary expertises are gathered and that experts coming from non European countries, and from the industrial sectors are included. They will be asked to develop their activities and recommendations based on the scenario proposed by the ESA Space Exploration Architecture – i.e. human presence in Low Earth Orbit, a return to the Moon and human exploration of Mars.

THESEUS' work plan is structured to develop a survey of the state of the art, an improved focus on the relevance of the research for current and upcoming health challenges on Earth and potential bio-medical applications, a detailed set of disciplinary priorities and an integrated roadmap providing strategic orientations for research.



**JEAN-CLAUDE WORMS**  
IS PROJECT COORDINATOR



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**THESEUS aims at establishing a life sciences research roadmap for European human space exploration, and to identify how this can benefit people on Earth.**

### QUESTIONS & ANSWERS

#### What do you want to achieve with this project?

To make Europe a mandatory partner of an international human space exploration programme by identifying related life sciences research priorities and build a European network as the core of this strategy, relying on ESA programmes and supported through the EC Framework Programme.

#### Why is this project important for Europe?

Exploration of space (Mars, Moon, etc) remains one of the most stimulating and exciting areas of scientific research and technological development. Yet, Europe has no roadmap approved by the European scientific and industrial communities to support its ambitions in this context.

#### How does your work benefit European citizens?

By answering challenges in human health prevention, diagnosis and care, THESEUS will also outline the relevance for terrestrial health challenges and biomedical applications, and ensure dissemination of knowledge in both space research and Earth-based applications to the public.

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## LIST OF PARTNERS

- Centre National de la Recherche Scientifique, France
- Deutsches Zentrum für Luft- und Raumfahrt, Germany
- Institut de Médecine et de Physiologie Spatiales, France
- Studiecentrum voor Kernenergie, Belgium
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## PROJECT INFORMATION

Towards Human Exploration of Space: a European Strategy (THESEUS)

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