

Job Title: Internal Research Fellow (PostDoc) in Exobiology Research Coordination

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EUROPEAN SPACE AGENCY

Research Fellowship Opportunity in the Directorate of Human Spaceflight and Robotic Exploration Programmes.

ESA is an equal opportunity employer, committed to achieving diversity within the workforce and creating an inclusive working environment. Applications from women are encouraged.

Post

Internal Research Fellow (PostDoc) in Exobiology Research Coordination

This post is classified F2.

Location

ESTEC, Noordwijk, The Netherlands

Description

The Science Department is responsible for the definition and coordination of the scientific research performed on-board of International Space Station ISS, other spaceflight platforms and ground based analogues within the SciSpacE element of the European Exploration Envelope Programme (E3P). The overall scientific objectives of SciSpacE until 2024 are defined in 10 science roadmaps which were elaborated with the scientific community. Within the Science Department, the Biology and Environment Research Office is responsible for inputs to programmatic and strategic planning, and the end-to-end science coordination of projects in the areas of Biology and Exobiology.

Interested candidates are encouraged to visit the ESA website: www.esa.int

Field(s) of activities/research

Exobiology is an interdisciplinary field which addresses the processes leading to the origin of life, the limits of life and identifying the signs of past and present extraterrestrial life. ESA has a long history of providing flight opportunities in low earth orbit, as well as ground based analogues, to support Exobiology research. These includes the short duration space exposure experiments in the BIOPAN facility onboard of Foton capsule missions and long duration exposure using the EXPOSE platforms onboard ISS. The results of these flight experiments and associated ground based studies have provided key information of the survival of micro-organisms in the space environment, aspects of panspermia, planetary protection issues and prebiotic chemistry in space and simulated planetary environments. A new set of Exobiology flight experiments are now under preparation for long duration space exposure onboard ISS which will examine changes in biological and chemical samples using in situ diagnostics, as well as post flight analysis on returned samples.

The SciSpacE Astrobiology roadmap identifies the key research questions that the Exobiology community aims to address by 2024 using the research platforms available in the programme. The specific top level objectives of the roadmap include understanding the origins of life, understanding habitability and the limits of life, and understanding the signs of life. It is anticipated that studies addressing these objectives will not only provide fundamental science knowledge, but support the interpretation of results from other Exobiology related programmes within the agency such as the Exomars mission.

The research fellow will engage in research in preparation and in support of the implementation of the SciSpacE Astrobiology roadmap including:

- Closely work with the project scientist for selected Exobiology experiments to coordinate definition & refinement of science requirements with the science teams, to support scientific testing during development of the flight experiment & receive and analyse data during the experiment execution.
- Support the creation of research links and coordinate with the Exobiology science community for identification of research activities in support of the Astrobiology Roadmap objectives, particularly in the area of ground based analogues and simulation to complement the ISS experiments planned in SciSpacE
- Support the establishment of the flight and analogue research capabilities needed to address the long term objectives beyond the current programme.

Technical competencies

Knowledge relevant to the field of research
Research/publication record
Ability to conduct research autonomously
Breadth of exposure coming from past and/or current research/activities
Interest in space and space research

Behavioural competencies

Innovation & Creativity
Continuous Learning
Communication
Relationship Management
Self Motivation
Problem Solving
Cross-Cultural Sensitivity

Education

Applicants should have recently completed, or be close to completion of a PhD in a research topic directly addressing Exobiology, for example microbiology/biology in extreme environments, chemistry or planetary science research relevant to astrobiology topics. Research experience with actual Exobiology flight experiments, studies in terrestrial analogue environments or laboratory simulations of planetary environments is a strong asset. Preference will be given to applications submitted by candidates within five years of receiving their PhD.

Additional requirements

Applicants should have good analytical skills and be able to work autonomously in a multi-cultural environment. The working languages of the Agency are English and French. A good knowledge of one of these is required. Knowledge of another Member State language would be an asset.

Other information

For behavioural competencies expected from ESA staff in general, please refer to the [ESA Competency Framework](#).

The Agency may require applicants to undergo selection tests.

The closing date for applications is 19 October 2017.

In addition to your CV and your motivation letter, please add your proposal of no more than 5 pages outlining your proposed research in the "additional documents" field of the "application information" section. Candidates are asked to arrange for 3 reference letters, to be sent by the referees themselves, before the closing date to temp.htr@esa.int. Please ensure your name is mentioned in the subject of the e-mail.

If you require support with your application due to a disability, please email contact.human.resources@esa.int.

Please note that applications are only considered from nationals of one of the following States: Austria, Belgium, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Luxembourg, the Netherlands, Norway, Poland, Portugal, Romania, Spain, Sweden, Switzerland, the United Kingdom and Canada and Slovenia as well as Bulgaria, Cyprus, Latvia, Lithuania, Slovakia as European Cooperating States (ECS).

Priority will first be given to candidates from under-represented Member States.

In accordance with the European Space Agency's security procedures and as part of the selection process, successful candidates will be required to undergo basic screening before appointment