

Job Title: Internal Research Fellow (PostDoc) in Life and Physical Sciences

Req ID 2201 - Posted 20/09/2017



EUROPEAN SPACE AGENCY

Research Fellowship opportunity in the Directorate of Technology, Engineering and Quality.

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 Life and Physical Sciences

This post is classified F2 on the Coordinated Organisations' salary scale.

Location

ESTEC, Noordwijk, The Netherlands

Description

The Mechatronics and Optics Division provides engineering support for space projects and executes technology developments in the areas of automation and robotics, mechanisms, life and physical science instrumentation, optics and opto-electronics.

The Life Support & Physical Sciences Instrumentation Section is the centre of competence of the Agency in areas related to instrumentation development for gravity-related experiments and exploration, ECLS design, engineering and verification. It provides support to projects, preparatory programmes and technology programmes. Within this framework, the Life Support and Physical Sciences Instrumentation Section is in charge of instrument development for microgravity and exploration.

Interested candidates are encouraged to visit the ESA website related to the Division's activities.

Field(s) of activities/research

The selected candidate will work on the 3D imaging of (living) cell dynamics under changed gravity conditions.

The Large Diameter Centrifuge (LDC) at ESA-ESTEC offers a versatile and unique experimental environment and is the ideal infrastructure to study the influence of hyper-gravity on physical and biological systems. The LDC can accommodate different equipment for experiments as well as large specimen batches. A newly developed Light Sheet-based Fluorescence Microscope (LSFM) provides the possibility to examine living systems in this environment. The microscope is integrated into the LDC and available for imaging three-dimensional cell cultures, such as human pancreas organoids (hPOs), under hyper-g conditions. The main focus of the Research Fellow will be on this topic.

In parallel to the hyper-g experiments with the LDC, simulated μ -g exposure of the cell cultures (e.g. hPOs) shall also be conducted using the equipment available in the ESA-ESTEC Life & Physical Sciences Laboratory, in particular the Full Size Random Positioning Machine (RPM) as well as the clinostats. Also 1g reference cultures will need to be kept.

Technical competencies

- Ability to conduct research autonomously
- Breadth of exposure coming from past and/or current research/activities
- Knowledge relevant to the field of research
- Interest in space and space research
- Ability to gather and share relevant information

Research/publication record

Behavioural competencies

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

Education

Applicants should have recently completed, or be close to completion of a PhD in physics, chemistry, biology or a related field and have prior experience relevant to the field of research. Preference will be given to applications submitted by candidates within five years of receiving their PhD.

Additional requirements

The Research Fellow must be able to work in a team with other international investigators in the spirit of positive co-operation and, at the same time, be capable of working autonomously in his/her area of research. At the end of the fellowship, the Research Fellow will be required to summarize the work completed so that it can be included in papers to be submitted to specialized conferences/journals.

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 18 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. Candidates must also arrange for three letters of reference to be sent by e-mail, before the deadline, to temp.htr@esa.int. The letters must be sent by the referees themselves. The candidate's name must be mentioned in the subject of the email.

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