

Life Science Research using the Human Spaceflight Analogue "Bed Rest"

UK-EU collaborative funding

Call status: Closed

ESA Letter of Intent deadline: 4 November 2013

BBSRC Letter of Intent deadline: 4 November 2013

BBSRC proforma deadline: 13 December 2013

ESA application deadline: 6 January 2014

We are pleased to announce that we will support UK researchers in the biology of ageing field to participate in the European Space Agency's Announcement of Opportunity for Bed Rest experiments.

We will invest **up to £3M** to support UK components of applications submitted to this call and will work closely with the UK Space Agency to coordinate this activity.

Background

The UK's subscription to the European Space Agency's (ESA) European Life and Physical Sciences (ELIPS) programme has opened the way for UK-based researchers to participate in this unique, cross-disciplinary programme, and making use of a diverse range of facilities including centrifuges, parabolic flights and bed rest facilities.

Research on ageing has been identified by BBSRC as one of the key areas of research in the UK which might benefit from the ELIPS programme. ESA's bed rest facilities in particular could offer an important tool for addressing questions related to health and wellbeing in an ageing population. Refer to the joint BBSRC/UKSA workshop report for additional information.

Summary

Exposure to space environments, in particular microgravity, causes deconditioning of physiological systems analogous to accelerated ageing. Bed rest studies have been shown to be a good model for many of the physiological changes that take place during human spaceflight and thus, will provide a unique opportunity to study:

- the biological mechanisms behind the physiological changes associated with ageing and a sedentary population
- the effect of proposed countermeasures to limit these changes
- the recovery period following bed rest

Scope

The ESA announcement of opportunity is soliciting proposals to be implemented in one long-duration BR study in male subjects. Long-duration BR studies are defined in the ESA standardisation as having a baseline data collection period of 14 days, a head-down tilt period of 60 days, followed by a recovery period of again 14 days.

The foreseen countermeasure protocol that will be tested is a nutritional supplementation with a "cocktail" of anti-inflammatory and anti-oxidant substances. While the exact definition of the "cocktail" is currently still ongoing, it is likely to include Resveratrol, Vitamin E+C, Lycopene and Epigallocatechin. There will be one control, and one intervention group.

Full call details are available on the European Space Agency (ESA) website

Eligibility

Standard responsive mode eligibility rules apply. Full details of eligibility conditions can be found in our grants guide.

To be eligible for BBSRC co-funding, the UK component of applications must:

- include a biological science UK component
- fall within our remit
- address our Ageing-Lifelong Health and Wellbeing strategic priority area

International collaborative proposals are particularly encouraged, although it should be noted that BBSRC cannot provide funding for international co-investigators and their costs would have to be sought from their appropriate national funding body. Please refer to our grants guide for further information.

How to apply

This call is closed to applications

- Potential UK applicants are strongly advised to contact us prior to the application and submission process (see contact information below)
- The letter of intent and application must be submitted to ESA as specified in the announcement of opportunity. For more information visit the ESA website
- A copy of the letter of intent must be submitted to us (bbsrcbedrest@bbsrc.ac.uk) with additional information (up to one side of A4) containing the names of all UK applicants, a brief description of the research aims and summary of the UK component of the proposed project
- Full details of the BBSRC process for this bed rest study call is provided in the additional information

Contact

For specific BBSRC scientific remit queries contact:
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