

Letter of Intent Overview

Application

Ref. Number

ILSRA-2009-LoI-0601

Submission date

15/06/2009

Letter of Intent Details

Call

International Life Sciences Research Announcement: Research Opportunities for Flight Experiments in Space Life Sciences on the ISS (ILSRA-2009)

Proposal Title

New theory and technologies for improvement of Health Performance Status in microgravity

Acronym

TIHPSM

Keywords

Performance Status, chronobiology, food, drug, quantum chemistry in microgravity

Summary

The project is born to overcome the challenge of the new quantum technologies emerged in the past years thanks to the impulse of the science pioneers such as E. Schrödinger, (Nobel prize of physics in 1933), J. Eccles (Nobel prize of Medicine in 1963), D. Bohm, G. Preparata, J. Benveniste, B. Josephson Nobel Prize for Physics 1973, L. Montagnier Nobel prize of Medicine in 2008. In these decades, with the development of electronics we have witnessed the development of new technologies that still need further development, further studies in chemistry and physics, and all the efficiency validation processes. The increasing costs of the diagnosis procedures, the serious issues linked to the adverse reactions to drugs and chemical treatment in general, create urgency in the launch on the market of new technologies that permit to reduce the use of chemicals and guide their use for the optimisation of their efficiency when there are necessary. The project of QCT is to provide new technologies and application solutions in health and performance status on astronauts and people that will live in the space in the future with possible application also in the Public and private Health sector on the Earth. The recent decision of the EU to ban pesticides in Agriculture, 5 million adverse reactions to drugs, half of which severe, with hundred thousand casualties each year (source JAMA), serious issues with water and air pollution, make the bio-quantum vision of physic-chemical and biological processes a necessary and possible, albeit path to optimize the risk/benefit ratio in the diagnosis and therapies. Similar optimization processes are indispensable to sustain and improve the life of people in the space. For this proposal we will use in the experiments some technologies to drive the food water and drug supplies, already tested during many research on people and in an experiment in parabolic fly in 2007 with use some water and drug for manage sickness syndrome in microgravity. We will use also and some new bioeletromagnetics technologies to improve the performance status in microgravity.

Area(s) of Research

Life Sciences / Crew Health Care / Drug effects
 Life Sciences / Crew Health Care / Monitoring and self care
 Life Sciences / Crew Health Care / Other
 Life Sciences / Psychology / Countermeasures

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