Press release

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Space and Health
CNES and Inserm sign framework agreement at the Elysée Palace in the presence of the French President

CNES, the agency responsible for recommending and implementing French space policy, and Inserm, Europe's foremost biomedical research institute, have decided to further their cooperation in the field of space and health. They have now signed their first framework agreement relating to advances in basic research made by the study of humans in space and to the use of space assets for health issues.

Space is an extraordinary laboratory for medicine and medical research on Earth. The loss of muscle mass and bone density, accelerated ageing of the arteries and disturbances to the body clock observed in astronauts due to the lack of gravity have improved our understanding of the human body.

Humans have been almost constantly in space for the last 40 years or more. Throughout that time, the chief concern of space agencies has been to guarantee their astronauts' safety by taking adequate precautions. But new devices have been in place these last few years that enable us to monitor astronauts' health, opening up the possibility of basic research in the areas of physiology and medicine, led by Inserm and CNES. What's more, these devices can also be used for medical research and within the public health sector.

Signed by Inserm CEO Yves Lévy and CNES President Jean-Yves Le Gall, in the presence of French President François Holland, this new framework agreement promotes collaboration in the field of health to improve our understanding of:
- The impact of space conditions on physiology and the related health consequences (especially the sensorial, cognitive, biomechanical and immunological consequences)
- How health studies in space conditions enable us to explore new therapeutic fields
- The physiological effects of radiation exposure.

The purpose of the agreement is to develop methods, tools and services drawing, amongst other things, on health-related space technologies such as:
- The development of connected devices created specifically for human spaceflight
- The development of medical devices.

It will also lead to a wide range of experiments during Thomas Pesquet's stay on board the International Space Station. Plus it will give access to ground simulation experiments as well as to research projects relating to parabolic flights and recoverable capsules.

CNES President Jean-Yves Le Gall added: "*Thomas Pesquet's flight will enable us to write a new chapter in the book of French excellence for human spaceflights. This framework agreement with Inserm will enable medical research to benefit from all the advances made by studying humans in space, plus everything resulting from those advances in terms of both new methods and devices and new insights into traditional health issues.*" Inserm CEO Yves Lévy said: *"This agreement is a first between our two organisations, each of which is a symbol in its own right of French excellence in Europe and the world. It represents a key milestone, enabling us to combine the exploration of extreme environments with the most advanced technology to further human health research."*

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