

SPACE LIFE SCIENCES SYMPOSIUM (A1)
Multidisciplinary Space Life Sciences Research (8)

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AN ITALIAN CENTER FOR TRANSFERRING HEALTH METHODOLOGIES FROM SPACE TO
GROUND

Abstract

Thanks to the Italian Space Agency (ASI) efforts, the Italian achievements in Space are impressive: both in the realization of the International Space Station and in the field of Space Science, especially as far as Life Sciences are concerned.

Between 2005 and 2010, ASI financed three mega national projects: MoMa (“From Molecules to Man: Space Research Applied to the Improvement of the Quality of Life of the Ageing Population on Earth”), this one coordinated by one of us, OSMA (Osteoporosis and Muscular Atrophy) and DCMC (Motor and Cardiorespiratory Control Disturbances).

This huge collaborative effort (numbers: nearly 15 MEuro/each project in a 3-year period, more than 1000 researchers, including the top Italian Scientists in these fields, and practically all the Italian Space Industries and Small and Medium Enterprises) gathered a strong Scientific and Industrial partnership, in which all worked together.

The need to establish a new scientific Society to organize national Congresses and other means of exchanging ideas and results, clearly emerged, bringing in early 2006 to foundation of the Italian Society for Space Biomedicine and Biotechnology (ISSBB) whose President is one of the authors.

The Italian Scientific community is very active, and strongly asking for “Our space in Space” (the “motto” of the 6th National Congress): a new strategic asset is required, an Italian Centre for Health from Space to Ground, dedicated to transferring medicine methodologies from space to Earth applications (for rehabilitation, prevention, degenerative diseases treatment), to co-operate with existing similar centers to gather and disseminate data, resources and facilities and finally to provide an infrastructural support to the already flourishing Scientific and Industrial community. This paper aims to describe the Centre features and stimulate an international debate about establishing and interconnecting similar Centres around the world.

The Centre could be optimally hosted in ALTEC (Advanced Logistics Technology Engineering Centre), a public/private company incorporated in Turin by Thales Alenia Space Italy, ASI, a local consortium among local authorities and Finmeccanica.

ALTEC, specialized in providing services to support Space utilization, was actively involved in the three ASI space medicine mega national projects. ALTEC many facilities include the Neutral Buoyancy Test Facility, a unique pool completely above ground, part of ESA’s Ground Based Facilities pool, a great Physiology research tool.