

||||| 特集：JAMIC の成果 |||||  
(解説)

## 微小重力環境で生命（いのち）を解く： 地下無重力施設（JAMIC）からの研究報告

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### **Description of Life under Microgravity: Scientific Report from the Underground Facilities (JAMIC)**

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#### **Abstract**

Biomedical experiments under microgravity using 10 seconds' dropping capsule at JAMIC has started on January 19 of 2000. The first experiment was to examine the neuro-cardiological response of rats upon sudden exposure to the microgravity conditions<sup>1)</sup>. Secondary, gene expression analysis on human lymphocytes was conducted using newly developed equipment for 8 seconds' microgravity. The resulting data showed several up-and down-regulated genes, some of which corresponding to those identified for the astronauts' specimen during their flight<sup>2)</sup>. Thirdly, delayed immune-reaction was shown using 8 seconds' microgravity. Because of newly developed instrument in this study, various kind of Biomedical experiments under microgravity became more accessible than before, expanding the dream of the biochemists to outer Space<sup>3)</sup>. In parallel with these experimental studies, Field Medicine was opened in Urausu which is very close to Kamisunagawa (JAMIC). Field Medicine is a newly built preventive-, health-promoting Medicine for the elderly<sup>4,5,7)</sup>. We believe this Field Medicine will prove very productive for creating Space Medicine.