1. Title
FY2004 Ground-based Research Program for Space Utilization Research Report

2. Research Term
FY2004—2006

3. Research Fields
Life Science

4. Research Categories
Incoming Research for Space Utilization

5. Research Theme
Molecular mechanisms of lineage determination and osteoblast differentiation under micro gravity.

6. Investigators
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8. Summary of Research
We have pursued molecular mechanisms of lineage determination and osteoblast differentiation under micro gravity. By using various techniques including micro-array, cell biology, molecular biology, histology, dynamic morphometry, microCT and densitometry in combination of recombinant mouse technology we have unraveled novel roles of PPR which increases significantly bone mass and progenitor pool of cells in osteoblastic lineages in determination of the mass of bone.

9. Publication List

• Saita Y, Takagi T, Kitahara K, Usui M, Ezura Y, Nakashima K*, Kurosawa H, Ishii S, Noda
M. Lack of schnurri-2 expression associates with reduced bone remodeling and osteopenia.  


10. URL