

Project No.:16003 Core Institution in Japan:Tokyo Medical and Dental University
--

**JSPS Core-to-Core Program -Strategic Research Networks-
FY2008 Research Report**

Project No.	16003
Research Theme	Advanced Molecular Pathophysiology of Bone and Cartilage Diseases
Duration of Project	3
Core Institution in Japan	Tokyo Medical and Dental University

Implementing Organizations

Country	Japan
Core Institution	Tokyo Medical and Dental University
Co-Chair (name and title)	Masaki Noda,Professor
Number of Cooperating Institutions	1
Cooperating Institutions	University of Tokyo

Country	United State of America
Core Institution	Harvard University
Co-Chair (name and title)	Henry Kronenberg,Professor
Number of Cooperating Institutions	5
Cooperating Institutions	Stanford University University of Dayton Rutgers University The Forsyth Institute Thomas Jefferson University
Matching Fund	NIH

Country	Canada
Core Institution	Tronto University
Co-Chair (name and title)	Jane E Aubin,Professor
Number of Cooperating Institutions	2
Cooperating Institutions	University of British Columbia University of Western Ontario
Matching Fund	Canadian Arthritis Network

Country	Austria
Core Institution	Institute of Molecular Pathology,Vienna University
Co-Chair (name and title)	Erwin Wagner,Deputy Director
Number of Cooperating Institutions	0
Cooperating Institutions	
Matching Fund	Austrian Academy of Science

Result of Program Implementation

In the fiscal year of 2008, we have accomplished the research activities to aim at the analysis and elucidation of the mechanisms of the diseases related to bone, cartilage and joints. Especially we have progressed in the research on the parathyroid hormone regulation of bone under the control of matrix protein and we also had a progress in the osteoporosis research with respect to the involvement of AP-1 transcription factor after ovariectomy. We have found that the matrix proteins are working in terms of the regulation of progenitors and also have discovered new mechanisms on the regulation of osteoclasts as well as osteoblasts.

We have accomplished sustained collaborative relationship between Japan, United States of America, Canada and Austria. The coordinators in these four countries have a strong tie among them and also with the young investigators in these countries. Senior research forums have been held to direct research and collaboration, and young investigator net meetings have been held to let the young scientists interact each other. The collaboration between the young people as well as the seniors is also continued. For the seminars and symposiums, we have held international meetings. Therefore all these activities including the collaborative research within young researchers and also the holding symposium and workshop are all fulfilled within the fiscal year of 2008.

Achievements in FY2008 (Self Review)

During this fiscal year of 2008, we have held the major international symposium in Tokyo on December 2 to 5, 2008. This symposium was attended by Dr. Jane Aubin from Canada, Dr. Henry Kronenberg from the United States and Dr. Erwin Wagner from Austria as well as Masaki Noda, Shigeaki Kato, Hiroshi Kawaguchi and Hiroshi Takayanagi. This meeting was also attended by a delegation of four major senior scientists from Canada and also the young investigators from Canada were sent by Canadian Arthritis Network and one of them was invited by the Japanese funding. The Japanese scientists are also invited by the Canadian Arthritis Network to attend the meeting and gave a talk in Toronto. Also, Austrian Society for Bone and Mineral Research invited Japanese coordinator to attend the Austrian Society for Bone and Mineral Research meeting to give a talk. Therefore mutual funding was also established by supporting the interaction between the participating countries. Young people have the opportunity to get together to give their presentation in front of the seniors from the four countries, and then they were given advice to debate by the different aspects of the research on bone and cartilage. A workshop for the young people was well attended by more than 300 people and active participation of the young researchers for this workshop made the opportunity possible to educate their research ability and the scientific achievement. Collaborative research was also established and many leading papers listed in the other page have reported from this program.