

“Forefront on Advanced Bone and Joint Science 2008 “

----- Molecular Regulation of Bone and Cartilage -----

—Symposium and Workshop—

Advanced Bone and Joint Science (ABJS)

International Collaboration Symposium between

**Core to Core Program of Japanese Society for Promotion of
Science (JSPS) &**

Canadian Arthritis Network (CAN)

Co-sponsored by;

Global Center of Excellence (Global COE) Program

**“International Research Center for Molecular Science in Tooth
and Bone Diseases”**

Medical Top Track Program

Venue: Tokyo Medical and Dental University

**(Core to Core program, Supported by Japanese Society for
Promotion of Science**

http://www.jsps.go.jp/j-bilat/core_to_core/index.html).

Tuesday, December 2, 2008

Opening

10:00 President Address Takashi Ohyama,

Tokyo Medical and Dental University

Director Address Mami Oyama

Director, International Program Department, Japan Society for the
Promotion of Science

CAN Address Jane Aubin

Canadian Arthritis Network

Introduction

10:10 Masaki Noda, Tokyo Medical and Dental University

Session Tu-1: Skeletal Cell Lineage

Moderator: Henry Kronenberg

10:30 Jane Aubin, University of Toronto

The osteoblast lineage

11:30 Derrick Rancourt, University of Calgary

Loss of discordant cells during micro-mass differentiation of embryonic
stem cells into the chondrocyte lineage.

12:30-13:00 Break

Session Tu-2: Transcription Factors and Epigenetics

Moderator: Rita Kandel

13:00 Erwin Wagner, Spanish National Cancer Research Centre

AP-1 (Fos/Jun) functions in Health and Disease

14:00 Shigeaki Kato, University of Tokyo

Epigenetic regulators for nuclear receptors

15:00 Break

Session Tu-3: Cell Signaling in Biology

Moderator: Shigeaki Kato

15:05 Sandra S. McAllister, Whitehead Institute for Biomedical Research

How do tumors get what they need?

16:05 Noriyuki Tsumaki, Osaka University

Roles of bone morphogenetic protein signals in cartilage formation

Special Lecture

Moderator : Masaki Noda

17:05 Henry Kronenberg, Harvard University

Growth plate closure in the absence of PTHrP receptors

Social Hour with Buffet

18:15 Mixing at Garden Palace Hotel, Tokyo, 3F Room Hei-an

Wednesday, December 3, 2008

Session W-1: Tumors and Skeletal Reconstruction

Moderator: Arthur Sampaio

09:00 Nora M. Navone, University of Texas

Bone metastases from prostate cancer: a significant medical problem

10:00 Masataka Majima, Kitasato University

Neuronal system-dependent facilitation of angiogenesis during tumor growth and chronic proliferative inflammation

11:00 Break

11:05 Ung-il Chung, University of Tokyo

Osteogenic and chondrogenic factors during endochondral bone formation

12:05-13:00 Break

Session W-2: Genetics in Bone Research

Moderator : Hiroshi Kawaguchi

13:00 Erwin Wagner, Spanish National Cancer Research Centre

New approaches to study AP-1 gene functions in bone development

14:00 Shiro Ikegawa, RIKEN

Genomic analysis of bone and joint diseases: Integrated approach from human and mouse genetics toward the disease genes and molecular pathogenesis of the diseases

15:00 Break

Session W-3: Bone Cell Regulation

Moderator: Erwin Wagner

15:05 Veronica Ulici, University of Western Ontario

Kinase pathways in cartilage development and osteoarthritis

15:35 Hiroshi Kawaguchi, University of Tokyo

Transcriptional regulation of chondrocyte differentiation.

16:35-16:40 Break

16:40 David Lee, University of Toronto

In vitro tissue-engineered cartilage from sheep bone marrow stromal cells on a porous calcium polyphosphate substrate

17:10 Koichi Matsuo, Keio University

Regulation of osteoblasts by osteoclasts.

Thursday, December 4, 2008

Session Th-1: Growth and Differentiation Modulators and DNA

Moderator: Caroline Hoemann

09:00 Sandra S. McAllister, Whitehead Institute for Biomedical Research

Systemic instigation of indolent tumor outgrowth requires osteopontin

10:00 Shigeaki Kato, University of Tokyo

Hormonal control of DNA demethylation for gene activation

11:00 Break

11:05 Masaharu Takigawa, Okayama University

Role of CCN2/CTGF/Hcs24 in skeletal growth

12:05-13:00 Break

Session Th-2: Tissue Formation and Cells

Moderator: Noriyuki Tsumaki

13:00 Rita Arbetman Kandel, University of Toronto

Towards Engineering a Biological Joint Replacement

14:00 Mototsugu Eiraku, RIKEN

Self-organized formation of polarized cortical tissues from ESCs

14:30 Yoichi Ezura, Tokyo Medical and Dental University

Methylation status of CpG-islands in the promoter regions of signature genes

15:00 Break

Session Th-3: Catabolic and Anabolic Regulation of Bone

Moderator: Nora Navone

15:05 Yukiko Kuroda, RIKEN

Osteoblasts induce Ca²⁺ oscillation-independent NFATc1 activation during osteoclastogenesis

16:05 Tomoki Nakashima, Tokyo Medical and Dental University

Molecular mechanism in osteoclastogenesis

17:05 Naoshi Ogata, University of Tokyo

Molecular mechanisms underlying osteoanabolic action of PTH.

Friday, December 5, 2008

Session F-1: Signaling Molecules in Skeleton

Moderator: Jane Aubin

09:00 Henry Kronenberg, Harvard University

Multiple roles of Gs alpha in osteoblasts

10:00 Hiromichi Kimura, Takeda Pharmaceutical Company Ltd

Effects of small molecule inhibitors of Hh signaling pathway in tumorigenesis and in postnatal bone development

11:00 Break

11:05 Arthur Vinicius Sampaio

Function of the Retinoid Signaling Pathway in Osteogenesis

12:05-13:00 Break

Session F-2: Skeletal Diseases and Cytokines

Moderator: McAllister

13:00 Nora M. Navone, University of Texas

Androgen Receptor–Negative Human Prostate Cancer Cells Induce Osteogenesis through FGF9-Mediated Mechanisms

14:00 Akihiro Yasoda, Kyoto University

Translational research of CNP/GC-B system for skeletal dysplasias

15:00 Break

Session F-3: Skeletal Pathology and Repair

Moderator: Derrick Rancourt

15:05 Caroline Hoemann, École Polytechnique

A novel medical device for articular cartilage repair based on in situ scaffold-guided cartilage regeneration

16:05 Jane Aubin, University of Toronto

ENU mutagenesis for new mouse models of human bone disease

17:05 Closing

Masaki Noda, Tokyo Medical and Dental University