

**The 12th RCGM International Symposium of Academic Frontier
- Advances in Genomic Medicine and Next Generation Technology -**

Symposium Program

12:30-18:45		Friday, October 31
12:30-12:35	Opening Remarks	Yasushi Okazaki (Director, RCGM, Saitama Med Univ)
Oral Sessions		12:35-14:35
12:35-13:30	Oral Session I	Co-Chairs: Hiroshi Asahara, M.D., Ph.D., Heonjoong Kang, Ph.D.
T-1	Kuniko Horie-Inoue (Division of Gene Regulation & Signal Transduction, RCGM) <i>A growth-modulatory long noncoding RNA in breast cancer identified by RNA sequencing</i>	
T-2	Masataka Hirasaki (Division of Developmental Biology, RCGM) <i>Does Nanog neutralize the apoptosis-promoting activity of c-Myc liberated from Max control?</i>	
T-3	Tetsu Yoshida (Division of Gene Therapy, RCGM) <i>Establishment of high efficient gene recombination system in human ES/iPS cells by the combination of helper-dependent adenoviral vector and CRISPR/Cas9 system</i>	
T-4	Yosuke Mizuno (Division of Functional Genomics & Systems Medicine, RCGM) <i>The regulatory mechanisms of adipocyte and osteoblast differentiation revealed by the integrated transcriptome analysis</i>	
T-5	Kenji Osawa (Division of Pathophysiology, RCGM) <i>Establishment of a new in vivo experimental model for heterotopic bone formation in skeletal muscle</i>	
T-6	Yutaka Nakachi (Division of Translational Research, RCGM) <i>Detection of the functional antisense transcripts during adipocyte/osteoblast differentiation in mouse bone marrow-derived stromal cell ST2</i>	
T-7	Kenta Fujimoto (Division of Gene Structure and Function, RCGM) <i>Transcriptional regulation by the long noncoding RNA transcribed from cyclin D1 promoter via protein arginine methylation of RNA-binding protein TLS</i>	
13:30-13:45	Break	

13:45-14:35 Oral Session II

Co-Chairs: Tomoaki Tanaka, M.D., Ph.D., Masao Kaneki, M.D., Ph.D.

T-8 Sachiko Shiba (Division of Gene Regulation & Signal Transduction, RCGM)
The role of vitamin K-dependent γ -glutamyl carboxylase in bone homeostasis and glucose metabolism

T-9 Miyuki Katano (Division of Developmental Biology, RCGM)
Loss of pluripotency and extensive cell death phenotypes of Nucleostemin knockout ESCs can be erased completely by the forced expression of Nanog or Esrrb

T-10 Masahito Matsumoto (Division of Functional Genomics & Systems Medicine, RCGM)
Screening system to identify the key regulators that determine pancreatic endocrine cell fate

T-11 Ryoma Yoneda (Division of Gene Structure and Function, RCGM)
Effect of RNA methylation on the function of promoter-associated noncoding RNA

T-12 Yumi Mizuno (Divisions of Translational Research, RCGM)
Analysis of mitochondrial function using a peroxisomal processing protein or Tysnd1 deficient mice

T-13 Takashi Shigekawa (Dept of Breast Oncology, Saitama International Medical Center)
Association of EBAG9 immunoreactivity with unfavorable prognosis in breast cancer patients treated with tamoxifen

14:35-14:45 Break

RCGM Special Lectures 14:45-17:55

14:45-15:30 Special Lecture 1

Chair: Kohnosuke Mitani

Hiroshi Asahara, M.D., Ph.D.
(Graduate School of Medical and Dental Sciences, Tokyo Medical and Dental Univ)
Genome editing technology for cartilage development and arthritis research

15:30-16:15 Special Lecture 2

Chair: Riki Kurokawa

Tomoaki Tanaka, M.D., Ph.D.
(Graduate School of Medicine, Chiba University)
Forefront of tumor suppressor p53 captured by metabolome and transcriptome analysis

16:15-16:25 Break

16:25-17:10 Special Lecture 3

Chair: Satoshi Inoue

Masao Kaneki, M.D., Ph.D.

(Department of Anesthesiology, Harvard Medical School)

Post-translational cysteine thiol modifications as a nodal point of inflammatory spiral

17:10-17:55 Special Lecture 4

Chair: Takenobu Katagiri

Heonjoong Kang, Ph.D.

(Center for Marine Natural Products and Drug Discovery, School of Earth and Environmental Sciences, Seoul National University)

Metabolic reprogramming of mice through chemistry

17:55-18:00 Gratitude & Awarding Ceremony

Poster Session I 18:00-18:45

Entrance Lobby

9:30-17:50	Saturday, November 1
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9:30-9:45 Introduction and Perspective of RCGM

Yasushi Okazaki (Director, RCGM, Saitama Med Univ)

RCGM Division Presentation 9:45-12:00

9:45-10:05 Division Presentation 1

Chair: Takenobu Katagiri

Akihiko Okuda (Division of Developmental Biology)
Role of Max in meiosis

10:05-10:25 Division Presentation 2

Chair: Akihiko Okuda

Kohnosuke Mitani (Division of Gene Therapy)
Strategies to enhance genome editing in human stem cells

10:25-10:45 Division Presentation 3

Chair: Satoshi Inoue

Riki Kurokawa (Division of Gene Structure and Function)
Emerging study on long noncoding RNA epigenetics

10:45-11:00 Break

11:00-11:20 Division Presentation 4

Chair: Yasushi Okazaki

Satoshi Inoue (Division of Gene Regulation & Signal Transduction)
Cancer therapeutic strategies targeting hormone-responsive coding genes and non-coding RNAs

11:20-11:40 Division Presentation 5

Chair: Riki Kurokawa

Takenobu Katagiri (Division of Pathophysiology)
Musculoskeletal system and the TGF- β family

11:40-12:00 Division Presentation 6

Chair: Kohnosuke Mitani

Yasushi Okazaki (Divisions of Functional Genomics & Systems Medicine and Translational Research)
Translational Research in Genomic Medicine Aimed at Next-Generation Therapeutics
- Clinomics focusing on mitochondrial disease –

Poster Session II 12:00-13:00

Entrance Lobby

RCGM Special Lectures 13:00-17:15

13:00-13:45 Special Lecture 5

Chair: Kohnosuke Mitani

Akiyoshi Fukamizu, Ph.D.

(Tsukuba Advanced Research Alliance, University of Tsukuba)

Regulation of methylation and gene expression

13:45-14:30 Special Lecture 6

Chair: Riki Kurokawa

Edwin Cheung, Ph.D.

(Faculty of Health Sciences, University of Macau)

Global view of steroid hormone signaling in cancer cells

14:30-14:45 Break

14:45-15:30 Special Lecture 7

Chair: Akihiko Okuda

Masatoshi Hagiwara, M.D., Ph.D.

(Kyoto University, Graduate School of Medicine)

Challenges to congenital genetic disorders with "RNA-targeting" chemical compounds

15:30-16:15 Special Lecture 8

Chair: Yasushi Okazaki

László Nagy, M.D., Ph.D.

(Sanford-Burnham Medical Research Institute, Orlando)

Genomic control of nuclear receptor mediated signaling in cell types associated with metabolic diseases and chronic inflammation

16:15-16:30 Break

16:30-17:15 Special Lecture 9

Chair: Satoshi Inoue

Kohei Miyazono, M.D., D.M.S.

(Graduate School of Medicine, University of Tokyo)

TGF- β family signaling in regulation of cancer

17:15-17:20 Gratitude Ceremony

Yasushi Okazaki (Director, RCGM, Saitama Med Univ)

17:20-17:35 Closing Remarks

Toshio Yamauchi (Honorary President, Saitama Med Univ)

17:35-17:50 Photo Session

18:00-20:00 Mixer

Lounge Yamane

Poster Presentation

- P-1 Yasuto Araki (Project Research Laboratory, RCGM)
The role of histone lysine methyltransferases in the pathogenesis of rheumatoid arthritis
- P-2 Mai Fujimoto (Division of Pathophysiology, RCGM)
Chondrogenic differentiation of murine embryonic stem cells carrying an active form of ALK2
- P-3 Kazuhiro Ikeda (Division of Gene Regulation & Signal Transduction, RCGM)
Estrogen-responsive gene COX7RP, encoding a mitochondrial protein, regulates breast cancer cell growth
- P-4 Kensuke Iwasa (Department of Pharmacology, Saitama Med Univ)
Prostaglandin F₂ α FP receptor inhibitor reduces demyelination and motor dysfunction in a cuprizone-induced multiple sclerosis mouse model
- P-5 Kensuke Iwasa (Department of Pharmacology, Saitama Med Univ)
Effect of extract X for working memory performance and amyloid- β protein in mice
- P-6 Takeshi Kajihara (Department of Obstetrics and Gynecology, Saitama Med Univ)
Androgen promotes trophoblast invasion into endometrial stromal cells in an in vitro model system
- P-7 Hidemasa Kato (Division of Developmental Biology, RCGM)
The bona fide pluripotency toward reproducible human neurogenesis
- P-8 Hidetaka Kawabata (Toranomon Hospital, Division of Gene Regulation & Signal Transduction, RCGM)
Routine histopathological variables predict 21-gene assay risk categories
- P-9 Yoshihito Kishita (Division of Functional Genomics & Systems Medicine, RCGM)
A mitochondrial respiratory chain disorder caused by impaired regulation of methylation in mitochondria
- P-10 Masakazu Kohda (Division of Translational Research, RCGM)
A comprehensive genomic analysis of 144 patients with mitochondrial respiratory chain deficiencies
- P-11 Arei Miyamoto (Division of Pathophysiology, RCGM)
Establishment of a new model of chondrogenesis using skeletal muscle cells
- P-12 Akiko Miyara (Department of Gynecologic Oncology, Saitama Int Med Ctr)
Application of uPA-dependent oncolytic Sendai virus vector to a treatment for ovarian cancer uPA
- P-13 Toshiaki Miyazaki (Division of Gene Regulation & Signal Transduction, RCGM)
Amyloid precursor protein modulates proliferation and migration in prostate cancer cells
- P-14 Takato Mizuta (Division of Pathophysiology, RCGM)
Establish of a new luciferase reporter plasmid for monitoring intracellular signaling of non-osteogenic members of the TGF- β family
- P-15 Nozomu Nishashi (Division of Gene Therapy, RCGM)
Establishment of fibroblast-like cell cultures with fluorescence reporter genes for osteoblast and hepatocyte differentiation: a tool for studies of direct reprogramming

- P-16 Masazumi Nishimoto (Division of Developmental Biology, RCGM)
The forced expression of Per2 and CKI ϵ genes allows establish circadian oscillation in embryonic stem cells
- P-17 Naoyuki Ohta (Division of Gene Therapy, RCGM)
A novel fiber-modified adenovirus-based vector has been constructed
- P-18 Masahiko Okubo (Division of Functional Genomics & Systems Medicine, RCGM)
Self-limiting system of osteoclast; Pax6 decreases the transcriptional activation of the TRAP promoter by NFATc1 and suppresses the osteoclast differentiation
- P-19 Toshiyuki Okumura (Division of Gene Regulation & Signal Transduction, RCGM)
Growth regulation by ribosomal protein L31 (RPL31) in bicalutamide-resistant prostate cancer cells through the p53 pathway
- P-20 Wataru Sato (Division of Gene Regulation & Signal Transduction, RCGM)
Assessment of therapeutic efficacy of siRNA-based agents using a metastasis model of breast tumor resistant to endocrine therapy
- P-21 Yumiko Shimamura (Department of Head and Neck Surgery, Saitama Int Med Ctr)
Analysis of candidate genes associated with sensitivity/resistance of docetaxel, cisplatin and 5-fluorouracil in hypopharyngeal cancer cell lines
- P-22 Yuhki Tada (Division of Translational Research, RCGM)
Clinical diagnosis of known genes that target familial colorectal cancer by targeted resequencing
- P-23 Yoshimi Tokuzawa (Division of Functional Genomics & Systems Medicine, RCGM)
Identifications and functional analyses of novel causative genes in mitochondrial respiratory chain disorder
- P-24 Takashi Tsuchihashi (Department of Ophthalmology, Saitama Med Univ)
Subtype- and phenotype-specific associations with major susceptibility genes for age-related macular degeneration
- P-25 Sho Tsukamoto (Division of Pathophysiology, RCGM)
Smad9 is a new type of transcriptional repressor in BMP signaling
- P-26 Sosuke Yagishita (Department of Pharmacology, Saitama Med Univ)
Establishment of a non-transgenic mouse model of neurodegenerative diseases with accelerated phosphorylation of endogenous tau
- P-27 Shinji Yamamoto (Department of Pharmacology, Saitama Med Univ)
Cyclic phosphatidic acid treatment suppresses cuprizone-induced demyelination and motor dysfunction in mice
- P-28 Yzumi Yamashita-Sugahara (Division of Functional Genomics & Systems Medicine, RCGM)
Analysis of β cell differentiation using double fluorescence-labeled human iPS cells
- P-29 Tomotaka Yokoo (Experimental Animal Laboratory, RCGM)
Effect of betagenin on pancreatic β -cell proliferation and differentiation