

# 4th Hiroshima Conference on Education and Science in Dentistry



## Conference Program

October 9 (Sun), 10 (Mon), 2011

International Conference Center Hiroshima  
in Peace Memorial Park

Hiroshima University Faculty of Dentistry



# Program

# Program

October 9 (Sunday)

		Session and Speakers	Chairs
13:30	13:40	Opening Address Takashi Takata	
13:40	14:25	Special Lecture I : Personalized Medicine: Is dentistry ready? Martha Somerman	<i>Takashi Takata</i>
14:25	15:10	Special Lecture II : Innate Defense Peptides in the Oral Cavity Toshihisa Kawai	<i>Hidemi Kurihara</i>
15:25	17:30	Session I (Research): Transplantable Cells and Biomaterials for Regenerative Medicine	
		Yukio Kato (15:25 15:30)	
		Hiroo Iwata (15:30 16:10)	<i>Yukio Kato</i>
		Takashi Tsuji (16:10 16:50)	<i>Nawarat Wara-aswapati</i>
		Hiroshi Egusa (16:50 17:30)	<i>Charoen</i>
17:30	17:50	Plenary Lecture: Research Activities of Hiroshima University: Now and Future Eiko Tsuchiya	<i>Kazuo Tanne</i>

## *Welcome Reception*

19:30 21:30  
Hiroshima Andersen

## October 10 (Monday)

		Session and Speakers			Chairs
9:00	11:00	Session II (Research)	Frontier Researches in Biodental Sciences		
		<Regeneration I > - Research Aiming for Improved QOL through Oral Health			
		Nattanan Govitvattana	( 9:00	9:04)	
		Yukiko Nakajima	( 9:04	9:08)	<i>Lee You mee</i>
		Masae Kitagawa	( 9:08	9:12)	
		Joji Kusuyama	( 9:12	9:16)	<i>Shen Jiefei</i>
		Danilo Janune	( 9:16	9:20)	
		Isao Hirata	( 9:20	9:24)	
		Remarks	( 9:24	9:28)	
		<Regeneration II > - Research Aiming for Improved QOL through Oral Health			
		Maki Uyama	( 9:28	9:32)	

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11:30	12:00	Poster Award Ceremony	
		Closing Remarks	Martha Somerman
		Closing Announcement	

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# Oral Presentation

*MEMO*



Sunday, October 9 13: 40 — 14: 25

## Special Lecture I

Personalized medicine: Is dentistry ready?

**Martha J. Somerman**

The National Institute of Dental and Craniofacial Research  
at the National Institutes of Health



*MEMO*

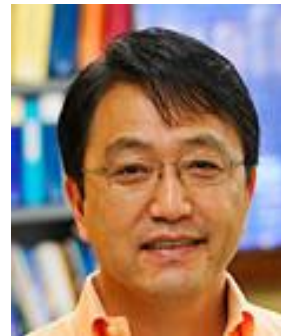
Sunday, October 9 14: 25 — 15: 10

## Special Lecture II

Innate Defense Peptides in the Oral Cavity

**Toshihisa Kawai**

The Forsyth Institute, Department of Immunology



*MEMO*

Sunday, October 9 15:25 — 17:30

**Session I (Science) :**

*“Transplantable Cells and Biomaterials for Regenerative Medicine”*

15:25 15:30

Introduction

Yukio Kato

Hiroshima University



15:30 16:10

Cell Surface Modification with Polymers for Biomedical Studies

Hiroo Iwata

Kyoto University



16:10 16:50

Fully Functional Bioengineered Tooth Replacement as a Future  
Tooth Regenerative Therapy

Takashi Tsuji

Tokyo University of Science



16:50 17:30

The Impact of Gingival Fibroblast-Derived iPS Cells on Dental Science

Hiroshi Egusa

Osaka University



*MEMO*

Sunday, October 9 17:30 — 17:50

## Plenary Lecture

Research Activities of Hiroshima University: Now and Future

Hiroshima University, Executive and Vice-President (Research)

**Eiko Tsuchiya**

Executive and Vice president (Research) Hiroshima University



*MEMO*



Monday, October 10 9:00 — 11:00

**Session II (Science) : *Frontier Researches in Biodental Sciences***

*<Regeneration I > in conjunction with “Research Aiming for Improved QOL through Oral Health”*

*9:00–9:28*

9:00 9:04

IL-6 induced Rex-1 expression in stem cells from human exfoliated deciduous teeth

Nattanan Govitvattana

9:04 9:08

Effect of advanced glycation end-products on calcified tissue formation in rat dental pulp cell cultures

Yukiko Nakajima

University of Tokushima

9:08 9:12

F-spondin promotes the differentiation of human periodontal ligament cells

Masae Kitagawa

Hiroshima University

9:12 9:16

Cot/Tp12 is functionally involved in the stretch-induced down-regulation of PPARgamma1 expression in osteoblasts

Joji Kusuyama

Kagoshima University

9:16 9:20

Novel effects of CCN3 that may direct the differentiation of chondrocytes

Danilo Janune

Okayama University

9:20 9:24

Calcium phosphate nucleation ability on the Titanium surface modification by self assembled monolayers

Isao Hirata

Hiroshima University

9:24 9:28 Remarks

*<Regeneration II> in conjunction with "Research Aiming for Improved QOL through Oral Health"*

*9:28-10:00*

9:28 9:32

Regulation of both osteoblastic and myogenic differentiation by proteasome inhibitor bortezomib

Maki Uyama

Hokkaido University

9:32 9:36

Effects of mechanical loading on the condyle in a rat mandibular distraction model

Naoko Sakagami

Niigata University

9:36 9:40

A crucial role of osteocytes in osteoclastic bone resorption during orthodontic tooth movement

Tikara Matsumoto

Tokyo Medical and Dental University

9:40 9:44

Signaling modulations of Rgs19 in palatal EMT process

Wern-Joo Sohn

Kyungpook National University

9:44 9:48

Anti-M3 muscarinic acetylcholine receptor antibody causes aquaporin-5 dependent hypo-secretion of saliva in a mouse model of Sjögren s syndrome

Mikihito Kajiya

The Forsyth Institute

9:48 9:52

Anti-inflammatory effect of erythropoietin on human dental pulp cells

Qimei Gong

Sun Yat-sen University

9:52 9:56

Flavonoids promoting osteogenic differentiation of dental pulp stem cells

Lee, Yi-Sheng

Taipei Medical University

9:56 10:00 Remarks

<Microbiology>

10:00–10:28

10:00 10:04

*Actinobacillus actinomycetemcomitans* fimbrial adhesin profile from patients with aggressive periodontitis in Clinic of Periodontic Faculty of Dentistry Airlangga University

Rini Devijanti Ridwan

Airlangga University

10:04 10:08

Systems biology unravels a novel pathogenic mechanism of heterogeneous *P. gingivalis* lipid A structures in chronic periodontitis

T.D.K. Herath

University of Hong Kong

10:08 10:12

Tea catechin epigallocatechin gallate suppresses cariogenic virulence factors of *Streptococcus mutans*

Xin Xu

West China School of Stomatology, Sichuan University

10:12 10:16

Retained microbial flora in toothbrushes following usage of herbal & fluoridated toothpastes

R.D.M.D.L. Rajakaruna

University of Peradeniya

10:16 10:20

Prevalence of oral herpes patients in dental clinic of the Faculty of Odonto-Stomatology from 2005 to 2009

Lim Ratanak

University of Health Sciences

10:20 10:24

Discovery of novel antifungal small-molecules in *Candida albicans*

Takao Watamoto

Osaka University

10:24 10:28      Remarks

*<Biomaterial and Clinical>*

*10:28-11:00*

10:28 10:32

The efficiency of milk and egg white in storage of avulsed teeth

Huynh Cong Nhat Nam

University of Medicine and Pharmacy of Ho chi Minh City

10:32 10:36

A biomimetic strategy to induce remineralization of partially demineralized dentine

Zhang Xu

Dental College of Tianjin Medical University

10:36 10:40

The effect of recasting on the quality of pure titanium castings by MgO-based investment

Pei-Lin Lai

Kaohsiung Medical University

10:40 10:44

Synthesis and characterization of nanosilica as filler for the novel dental resin system

Chanthiriga Ramasindarum

University of Malaya

10:44 10:48

Characteristics of toothbrushing in 4-5 year-old children in Selangor Malaysia

Tan Bee Siew

International Medical University (IMU)

10:48 10:52

Evaluation of quality of life according to temporomandibular disorder associated symptoms in dental hospital worker

Kim, Dong-kook

Wonkwang University

10:52 10:56

Oral Impacts affecting daily performance in Thai secondary school students

Rajda Noisombut

Khon Kaen University

10:56 11:00      Remarks

*MEMO*

Monday, October 10 11:00 — 11:30

**Session III (Education)** : *Standardization and Mutual Recognition of Dental Education in Asia*  
*11:00–11:30*

11:00 11:15

Chulalongkorn University Faculty of Dentistry Curriculum Reform  
Wacharaporn Tasachan  
Chulalongkorn University



11:15 11:30

Challenges of Dental Education in Asia: Advocating Standardization  
and Collaboration  
Khoo Suan Phaik  
International Medical University (IMU)



*MEMO*

Sunday, October 9 17:50 — 18:50

**Poster Discussion**



*MEMO*

11:30 12:00

Closing Remarks

-Poster Awarding Ceremony-

Rosnah Mohd Zain  
Dean, University of Malaya

Closing Remarks

-Summary of Meeting-

Martha Somerman  
Director of the National Institute of Dental and Craniofacial Research at the  
National Institutes of Health

Closing Announcement

***Airlangga University, Indonesia***

01-1

Interleukin-8 and Interleukin-10 expression on traumatic ulcer treated with lactoferrin 10mg/ml

**N.F. Ayuningtyas**

01-2

*Actinobacillus actinomycetemcomitans* fimbrial adhesin profile from patients with aggressive periodontitis in Clinic of Periodontic Faculty of Dentistry Airlangga University**R.D. Ridwan**

01-3

Variant analysis of HLA-DRB1 on immunogenetic pathway of sIgA secretion in saliva as dental caries risk (Study in javanese population in Surabaya-Indonesia)

**P. Soesilawati*****Chulalongkorn University, Thailand***

02-1

IL-6 induced Rex-1 expression in stem cells from human exfoliated deciduous teeth

**N. Govitvattana and P. Pavasant**

02-2

Stress-induced IL-1 $\beta$  release in HPDL via vesicles and P2X7R/Pannexin-1 complex**K. Kanjanamekanant P. Luckprom and P. Pavasant**

02-3

Estradiol-induced osteoprotegerin in dental pulp cells via surface estrogen receptor

**J. Manokawinchoke, P. Ritprajak and P. Pavasant*****University of Health Sciences, Cambodia***

03-1

Prevalence of oral herpes patients in dental clinic of the Faculty of Odonto-Stomatology from 2005 to 2009

**V. Vutha, T. Tuy, S. Yem and R. Lim*****University of Medicine and Pharmacy of Ho chi Minh City, Vietnam***

04-1

The efficiency of milk and egg white in storage of avulsed teeth.

**H.C.N. Nam, L.D. Lanh and D.V.N. Mai*****University of Hong Kong, China***

05-1

***International Medical University (IMU), Malaysia***

06-1

Characteristics of toothbrushing in 4-5 year-old children in Selangor Malaysia

**T. Bee-Siew and I.A. Razak**

06-2

Stem cells from human exfoliated deciduous teeth (SHED): trend analysis

**K.Y.Q. Lau, Y.C. Chew, E.L. Tan, G.K. Tay and S.P. Khoo**

***Kaohsiung Medical University, Taiwan***

07-1

The effect of recasting on the quality of pure titanium castings by MgO-based investment

**P.L. Lai, C-C. Hung and J-C. Wang**

***Khon Kaen University, Thailand***

08-1

Oral impacts on quality of life in adolescent cleft patients

**A. Pisek and W. Pitiphat**

08-2

Oral impacts affecting daily performance in Thai secondary school students

**R. Noisombut, N. Chuchokchai, C. Kunkitti and P. Buengmoom**

***Kyungpook National University, Korea***

09-1

Genome wide screening of mesenchymal signalling molecules involved in epithelial differentiation during palatogenesis

**G-J. Gwon, W-J. Sohn, H-S. Kim, M-A. Choi, Z.Y. Ryoo,  
K-B. Song, S. Lee and J-Y. Kim**

09-2

Signaling modulations of Rgs19 in palatal EMT process

**W-J. Sohn, Y-R. Ji, H-S. Kim, K-J. Kwon, C-H. An, H. Park, H-S. Jung, Z.Y. Ryoo,  
S. Lee and J-Y. Kim**

***University Malaya, Malaysia***

10-1

The site of the lesion should be considered when identifying biomarkers for OSCC

**A. Saleh, H. Hussaini, F. NG, V. Tanavde, S. Hamid, M.T. Abraham, T. Soo-Hwang,  
R.B. Zain and C.S. Ching**

10-2

Synthesis and characterization of nanosilica as filler for the novel dental resin system

**C. Ramasindarum, N.H. Abu kasim, B. Vengadaesvaran and N.N. Naziron**

***University of Peradeniya, Sri Lanka***

11-1

Retained microbial flora in toothbrushes following usage of herbal & fluoridated toothpastes

**R.D.M.D.L. Rajakaruna, M.C.N. Fonseka, J.A.M.S. Jayatilake and U.B. Dissanayake**

***Sun Yat-sen University, China***

12-1

Effect of Ca/P concentration on the surface topography and micro-mechanical properties of Ti-Alloy micro-arc oxidation coating

**Y. Wang, H.B. Pan, C.Y. Ning and S.Q. Yang**

12-2

Anti-inflammatory effect of erythropoietin on human dental pulp cells

**Q. Gong, J. Ling, H. Jiang and J. Wang**

***Taipei Medical University, Taiwan***

13-1

Flavonoids promoting osteogenic differentiation of dental pulp stem cells

**Y-S. Lee, Y-W. Wu, Y-H. Tsai, S-C. Chen, W-F.T. Lai and S-Y. Lee**

***Dental College of Tianjin Medical University, China***

14-1

A biomimetic strategy to induce remineralization of partially demineralized dentine

**Z. Xu, G.O. Ping and A. Kishen**

***Sichuan University, China***

15-1

Tea catechin epigallocatechin gallate suppresses cariogenic virulence factors of *Streptococcus mutans*

**X. Xu, X.D. Zhou and C.D. Wu**

***Wonkwang University, Korea***

16-1

Evaluation of quality of life according to temporomandibular disorder associated symptoms in dental hospital worker

**D.K. Kim, H.D. Lim and Y.M. Lee**

***Hokkaido University, Japan***

17-1

Regulation of both osteoblastic and myogenic differentiation by proteasome inhibitor bortezomib

**M. Uyama, M. Sato, M. Kawanami and M. Tamura**

***Tohoku University, Japan***

18-1

Functional role of Platelet-derived growth factors involved in ameloblasts and odontoblasts proliferation

**Y. Sugawara, T. Iwamoto, M. Arakaki, M. Ono, M. Futagi, A. Yamada, T. Nakamura  
and S. Fukumoto**

***Niigata University, Japan***

19-1

Pharmacological manipulation of oral mucosa keratinocytes by blocking ALDH activity

**H. Kato, K. Izumi, M. Terada, H. Ohnuki, T. Saito, Y. Kawano, K. Nozawa-Inoue,  
C. Saito and T. Maeda**

19-2

Zoledronic acid induces S-phase arrest via a DNA damage response in normal human oral keratinocytes

**H. Ohnuki, K. Izumi, M. Terada, T. Saito, H. Kato, A. Suzuki, Y. Kawano,  
K. Nozawa-Inoue, R. Takagi and T. Maeda**

19-3

Histological and immunohistological analyses of oral mucosal epithelial organization and kinetics compromised by Bisphosphonates

**T. Saito, H. Ohnuki, K. Izumi, A. Shiomi, H. Kato, M. Terada, Y. Kawano,  
K. Nozawa-Inoue, R. Takagi and T. Maeda**

19-4

Effects of mechanical loading on the condyle in a rat mandibular distraction model

**N. Sakagami, T. Kobayashi, K. Nozawa-inoue, T. Kojima, M. Yoshizawa, C. Saito  
and T. Maeda**

***Tokyo Medical and Dental University, Japan***

20-1

A crucial role of osteocytes in osteoclastic bone resorption during orthodontic tooth movement

**T. Matsumoto, K. Moriyama and A. Yamaguchi**

***Osaka University, Japan***

21-1

Discovery of novel antifungal small-molecules in *Candida albicans*

**T. Watamoto, H. Egusa and H. Yatani**

***Okayama University, Japan***

22-1

Novel effects of CCN3 that may direct the differentiation of chondrocytes

**D. Janune, S. Kubota, T. Nishida, H. Kawaki, B. Perbal, S. Iida and M. Takigawa**

***University of Tokushima, Japan***

23-1

Effect of advanced glycation end-products on calcified tissue formation in rat dental pulp cell cultures

**Y. Nakajima, Y. Inagaki, M. Bando, Y. Hiroshima, J. Kido and T. Nagata**

***Kagoshima University, Japan***

24-1

Cot/Tpl2 is functionally involved in the stretch-induced down-regulation of PPARgamma1 expression in osteoblasts

**J. Kusuyama**

***Hiroshima University, Japan***

25-1

Newly developed carbonate apatite-chitosan scaffold for *in vitro* bone tissue engineering

**M.D. Ariani, A. Matsuura, I. Hirata, T. Kubo, M. Okazaki and Y. Akagawa**

25-2

The aspects of osseointegration of the implants placed in the reinforced bone by using interconnected porous calcium hydroxyapatite (IP-CHA)

**S. Kajihara, K. Doi, T. Kubo, A. Matsuura, K. Morita, H. Oue, R. Takeshita,  
C. Asamori and Y. Akagawa**

25-3

Development of implant/interconnected porous calcium hydroxyapatite complex

**H. Oue, K. Doi, T. Kubo, K. Koretake, K. Hayashi, S. Kajihara,  
K. Imura and Y. Akagawa**

25-4

Fungicidal effect of novel antimicrobial peptides derived from *Lactobacillus rhamnosus* L8020

**Y. Takamoto, H. Nikawa, Y. Takayama, E. Okura, H. Ishii, T. Taji and T. Uchida**

25-5

Expression and function of Retinoic acid-inducible gene-I (RIG-I) in oral keratinocyte and fibroblast

**A. Fukui, K. Ohta, H. Shigeishi, H. Nishi, M. Takechi and N. Kamata**

25-6

CaCC activity, localization and stability of TMEM16E

**T.T. Tran, S. Fujimoto, K. Mizuta, C. Hirono, M. Sugita and N. Kamata**

25-7

RHAMM induces proliferative activities of cementifying fibroma cells

**H. Hatano, H. Shigeishi, Y. Kudo, K. Higashikawa, T. Takata and N. Kamata**

25-8

Fabrication and basic properties of poly (DL-lactide-co-glycolide) containing carbonated apatite

**A. Ota, M. Takechi, K. Ota, Y. Ninomiya, T. Nakagawa, M. Tada, M. Minami,  
M. Takamoto, K. Tsuru and N. Kamata**

25-9

Immobilization of antimicrobial agent Et-QAC on the surface of denture acrylics and its evaluation of anticandidal activity

**Y. Takayama, Y. Takamoto, H. Ishii, E. Okura, K. Kawahara and H. Nikawa**

25-10

Application of immobilizing disinfectant to the hydroxyapatite

**M. Hiramatsu, Y. Takamoto, E. Okura, H. Ishii, Y. Takayama and H. Nikawa**

25-11

Evaluation of physical properties of commercially artificial saliva

**E. Okura, H. Nikawa, H. Ishii, Y. Takamoto and Y. Takayama**

25-12

Evaluation of antibacterial activity of commercial artificial saliva

**H. Ishii, E. Okura, Y. Takamoto, Y. Takayama and H. Nikawa**

25-13

Effects of biomimetic diamond-like carbon coated titanium on the differentiation of osteoblast and osteoclast cells

**S. Iwata, S. Makihira, H. Nikawa, T. Taji, Y. Mine, T. Takahagi and K. Okamoto**

25-14

The effect of bacteriocins derived from *Lactobacillus rhamnosus* against oral pathogens

**Y. Tomiyama, A. Hiyama, M. Kurose, T. Taji, K. Kawahara, H. Sasahara,  
M. Sasaki and H. Nikawa**

25-15

Bacteriocins of *Lactobacillus rhamnosus* L8020 inhibits *Porphyromonas gingivalis*

Lipopolysaccharide-induced pro-inflammatory cytokine secretion in murine macrophage-like RAW264.7 cells

**M. Kurose, Y. Mine, Y. Tomiyama, T. Taji, K. Kawahara, H. Sasahara,  
M. Sasaki and H. Nikawa**

25-16

Calcium phosphate nucleation ability on the Titanium surface modification by self assembled monolayers

**W. Jiang, I. Hirata, Z. Xianghui, M. Okazaki and K. Kato**

25-17

Anti-M3 muscarinic acetylcholine receptor antibody causes aquaporin-5 dependent hypo-secretion of

**M. Kajiya, S. Armazrooa, S-B. Woo, S. Cha, and T. Kawai**

25-18

F-spondin promotes the differentiation of human periodontal ligament cells

**M. Kitagawa, M. Miyauchi and T. Takata**

25-19

Long-term cryopreservation of rat MSCs by use of a programmed freezer with a magnetic field

**S. Kojima, M. Kaku, T. Kawata, M. Motokawa, T. Fujita, J. Ohtani, H. Koseki, S.  
Abedini, H. Sumi and K. Tanne**



25-20

An establishment of jaw cleft treatment with bone regeneration by use of mesenchymal stem cells derived from bone marrow

**K. Sumi, K. Tanimoto, Y. Tanne, M. Yoshioka, M. Sugiyama and K. Tanne**

25-21

Amelogenin-guided biomineralization of hydroxyapatite crystal on tooth enamel

**K. Tanimoto, R. Kunimatsu, Y. Yoshimi, M. Yoshioka, Y. Tanne and K. Tanne**

25-22

Immunohistochemical study of periodontal tissue regenerative process by BDNF

**A. Konishi, K. Takeda, H. Shiba, T. Ueda, T. Fujita, S. Matsuda,  
H. Kawaguchi and H. Kurihara**

25-23

Isolation and osteogenic differentiation of jaw bone marrow derived mesenchymal stem cells in beagle dogs

**T. Ueda, H. Kawaguchi, K. Wada, K. Takeda, T. Fujita, Y. Uchida and H. Kurihara**

25-24

The inhibitory effect of irsogladine maleate against Toll-like receptor 2 induction mediated by *Porphyromonas gingivalis* in human gingivalis epithelial cells

**I.J. Savitri, K. Ouhara, T. Fujita, T. Miyagawa, Y. Uchida, H. Shiba,  
H. Kawaguchi and H. Kurihara**

25-25

Two cases of bisphosphonate-related osteomyelitis of the mandible with solid type periosteal reaction

**M. Zaman, T. Nakamoto, Y. Suei and K. Tanimoto**

25-26

Adipose tissue inflammation and smoking synergistically suppress leptin expression in Japanese obese males: Potential mechanism of resistance to weight loss among obese smokers

**S. Nagayasu, S. Suzuki, A. Yamashita and F. Nishimura**

25-27

Age-related changes of sensory thresholds in the oro-facial region and the relationship of sensory thresholds with dysphagia

**R. Nishimura, K. Yamashita, K. Hara, H. Amano and M. Sugiyama**

25-28

Inhibitory effect of bLF on LPS-induced crosstalk among TLR pathways in osteoblast

**M. Okada, T. Morimoto, T. Inubushi, M. Miyauchi and T. Takata**

25-29

EMT induction by humoral factors in oral squamous cell carcinoma cell

**G. Okui, K. Higashikawa, A. Rizqiawan, H. Shigeishi, S. Ono and N. Kamata**

25-30

New role of PRIP in regulation of lipolysis

**T. Okumura, K. Harada, M. Hirata, N. Kamata and T. Kanematsu**

25-31

How many tooth-related genes are there in shark genome?

**M. Shinkawa, H. Nikawa, M. Ohara, S. Makihira and K. Kawahara**

25-32

Evaluation of the course work education employing Cognitive Behavior Therapy

**M. Shirakura, H. Oka, T. Kamiya, F. Suehiro, M. Sugai and M. Kobayashi**

25-33

Complex formation mechanism of CDT holotoxin of *Aggregatibacter actinomycetemcomitans*

**M. Tanaka, K. Tsuruda, O. Matangkasombut, M. Ohara and M. Sugai**

25-34

MEPE-associated phosphorylated ASARM is a potential target to facilitate bone mineralization

**M. Mohri, Y. Yoshiko, T. Minamizaki, H. Yoshioka and N. Maeda**