

**Ken-ichiro KAMEI**  
*Curriculum Vitae*

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**EDUCATION**

- Ph.D** Department of Biological Information  
2003. 3. 26 Tokyo Institute of Technology  
Supervisor: Eiry KOBATAKE, Ph.D.  
Thesis title: "Construction of chemical assessing system based on electrochemical nitric oxide monitoring"
- M.S.** Department of Biotechnology  
2000. 3. 26 Tokyo Institute of Technology
- B.A.** Department of Biotechnology  
1998. 3. 26 Tokyo Institute of Technology

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**PROFESSIONAL EXPERIENCE**

2006. 5 – Postdoctoral fellow, Pharmacology  
University of California at Los Angeles  
Supervisor: Hsian-Rong TSENG, Ph.D.
2003. 4 – 2006. 4 Postdoctoral fellow, Pharmacology  
University of California at Los Angeles  
Supervisor: Harvey R. HERSCHMAN, Ph.D.
2000. 4 – 2003. 3 Research Fellow of the Japan Society for the Promotion of Science  
Department of Biological Information  
Tokyo Institute of Technology

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**HONORS AND AWARDS**

- 2001 Takagi Award, Intelligent Material Symposium, Intelligent Material Forum

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**MEMBERSHIPS**

- 1998 - present Electrochemical Society of Japan

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**TECHNICAL EXPERIENCE**

**Analytical chemistry**

Electrochemical sensing, Optical microscopy, Atomic force microscopy, Surface plasmon resonance, Quartz crystal microbalance, Microfluidic device

**Molecular biology**

PCR, Electrophoresis, SDS-PAGE, Southern blotting, Western blotting, Vector construction, Free radical research,

## Cell

Cell culture (including mouse and human ES cells), Transfection, Immunocytochemistry,

## Mouse

Immunohistochemistry, *In vivo* reporter gene imaging with CCD camera, Construction of transgenic mice

## Adenovirus

Construction, Amplification, Purification, Plaque assay, Injection into mice

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## BIBLIOGRAPHY

### Original Papers

1. Zeta Tak For YU,\* Ken-ichiro KAMEI,\* Chengyi Jenny SHU, George Wenfu HE, Robert W. SILVERMAN, Caius G. RADU, Owen N. WITTE, Hsian-Rong TSENG, An integrated microfluidic chip for parallel culture and multiparametric analysis of murine and human cells, (submitted) (\*These two authors contributed equally to this work.)
2. Guodong SUI, Cheng-Chung LEE, Ken-ichiro KAMEI, Hua-Jung LI, Jun WANG, Harvey R. HERSCHMAN, Hsian-Rong TSENG, A Microfluidic platform for sequential ligand labeling and cell binding analysis, *Biomed. Microdev.*, 9, 301-305 (2007)
3. Ken-ichiro KAMEI, Tomo-o ISHIKAWA, and Harvey R. HERSCHMAN, Transgenic mouse for conditional, tissue-specific Cox-2 over-expression, *Genesis*, 44, 177-182 (2006)
4. Ken-ichiro KAMEI, Masayasu MIE, Yasuko YANAGIDA, Masuo AIZAWA, and Eiry KOBATAKE, Construction of cell based assessing system for chemicals on immune regulation using electrochemical NO sensor, *Sens. Actuat. B: Chemical*, 96, 106-112 (2004)
5. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Masayasu MIE, Yasuko YANAGIDA, Masuo AIZAWA and Eiry KOBATAKE, Construction of endothelial cellular biosensing system for blood pressure control drugs with electrochemical monitoring of nitric oxide, *Biosens. Bioelectron.*, **19**, 1121-1124 (2004)
6. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Masayasu MIE, Yasuko YANAGIDA, Masuo AIZAWA, and Eiry KOBATAKE, Development of immune cellular biosensing system for assessing chemicals on iNOS signaling activator, *Anal. Biochem.*, **320**, 75-81 (2003)
7. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Masayasu MIE, Yasuko YANAGIDA, Eiry KOBATAKE and Masuo AIZAWA, Cellular biosensing system for assessing immunomodulating effects on the inducible nitric oxide synthase (iNOS) cascade, *Biotechnol. Lett.*, **25**, 321-325 (2003)
8. Ken-ichiro KAMEI, Cellular biosensing system in response to drug stimuli, *Intelligent Materials*, **11**(3), 21-24 (2002); (in Japanese)

## Proceedings

1. John M. STREICHER, Ken-ichiro KAMEI, Harvey R. HERSCHMAN, Yibin WANG, The functional role of COX-2 and p38/MK2-mediated regulation in heart failure, *Circ. Res.*, **99**(5), E28 (2006)
2. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Masayasu MIE, Yasuko YANAGIDA, Eiry KOBATAKE and Masuo AIZAWA, Cellular biosensing system for assessing chemicals with the inducible nitric oxide synthase cascade, *Chem. Sens.*, **17**(Supl B), 95-97 (2001)
3. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Yasuko YANAGIDA, Eiry KOBATAKE and Masuo AIZAWA, Construction of the cellular biosensing system for assessment of drugs for the nervous system, *Chem. Sens.*, **17**(Supl A), 169-171 (2001)
4. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Eiry KOBATAKE and Masuo AIZAWA, Cellular biosensing system based on electrochemical monitoring of nitric oxide, *Chem. Sens.*, **16**(Supl A), 133-135 (2000)
5. Tetsuya HARUYAMA, Ken-ichiro KAMEI, Eiry KOBATAKE, Yasuko YANAGIDA and Masuo AIZAWA, Electrochemical nitric oxide (NO) sensing system with spin-trap reagent PTIO, *Proc. of International Meeting on Chemical Sensors (IMCS)*, 259-261 (1998)
6. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Yasuko YANAGIDA, Eiry KOBATAKE and Masuo AIZAWA, Construction of *in situ* NO sensor with radical scavenger, *Chem. Sens.*, **14**(Supl A), 169-172 (1998)

## International Conference

1. Ken-ichiro KAMEI, Zeta Tak For YU, Shuling GUO, <sup>4</sup> Hiroko TAKAHASHI, Carol SUH, Runsheng WANG, Jenny SHU, Caius Radu, Owen N. Witte and Hsian-Rong Tseng, An Integrated Microfluidic Platform for Multiparametric Analysis of Cells and the Application to hESC Culture, 5<sup>th</sup> ISSCR Annual Meeting (2007)
2. Ken-ichiro KAMEI, Zeta Tak For YU, Shuling GUO, Carol SUH, Hiroko TAKAHASHI, Runsheng WANG, Chengyi Jenny SHU, Caius G. RADU, Owen N. WITTE and Hsian-Rong TSENG, An integrated microfluidic platform for screening hESC culture conditions, *Stem Cells 2006* (2006)
3. Eiry KOBATAKE, Ken-ichiro KAMEI, Masayasu MIE, Masuo AIZAWA, Development of cellular biosensing system for assessing chemicals, *ISBS2004, AEARU International Symposium of BioSystems* (2004)
4. Eiry KOBATAKE, Ken-ichiro KAMEI, Masayasu MIE, Masuo AIZAWA, The Cellular biosensing system for assessing chemicals in inducible nitric oxide synthase cascade, *10th International SPACC (The Society of Pure and Applied Coordination Chemistry) Symposium* (2003)
5. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Masayasu MIE, Yasuko YANAGIDA, Eiry KOBATAKE and Masuo AIZAWA, Cellular biosensing system for assessing chemicals with the

- inducible nitric Oxide synthase Cascade, *5th East Asian Conference on Chemical Sensors*, (2001)
6. Masuo AIZAWA, Ken-ichiro KAMEI, Tetsuya HARUYAMA and Eiry KOBATAKE, Cellular sensing devices for assessing chemicals, *23rd International Conference of IEEE Engineering in Medicine and Biology Society*, (2001)
  7. Masuo AIZAWA, Gi Hun SEONG, Ken-ichiro KAMEI, Yasuko YANAGIDA, Tetsuya HARUYAMA and Eiry KOBATAKE, Toward ultimate biosensing – From single-molecular to extremely massive and complexed molecular sensing -, *8th IMCS*, (2000)
  8. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Yasuko YANAGIDA, Eiry KOBATAKE and Masuo AIZAWA, Cellular biosensing system with endothelial cells for assessing blood pressure control drugs, *International Chemical Congress of Pacific Basin Societies*, (2000)
  9. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Yasuko YANAGIDA, Eiry KOBATAKE and Masuo AIZAWA, Electrochemical monitoring of nitric oxide in cell culture, *196th The 1999 ECS and ECSJ Joint International Meeting*, (1999)
  10. Tetsuya HARUYAMA, Ken-ichiro KAMEI, Eiry KOBATAKE, Yasuko YANAGIDA and Masuo AIZAWA, Electrochemical nitric oxide (NO) sensing systems with spin-trap reagent PTIO, *7th IMCS*, (1998)

#### **National Meetings**

1. John M. STREICHER, Ken-ichiro KAMEI, Harvey R. HERSCHMAN, Yibin WANG, The functional role of COX-2 and p38/MK2-mediated regulation in heart failure, *3<sup>rd</sup> Annual Symposium of the American Heart Association Council on Basic Cardiovascular Sciences - Translation of Basic Insights Into Clinical Practice* (2006)
2. Ken-ichiro KAMEI, Masayasu MIE, Yasuko YANAGIDA, Masuo AIZAWA, and Eiry KOBATAKE, Construction of cell based assessing system for chemicals with monitoring NO as the cellular-response indicator, *70<sup>th</sup> Meeting of Electrochemical Society of Japan* (2003)
3. Ken-ichiro KAMEI, Masayasu MIE, Yasuko YANAGIDA, Eiry KOBATAKE, and Masuo AIZAWA, Assessment of blood pressure control drugs with cellular biosensing system, *81<sup>st</sup> Meeting of the Chemical Society of Japan* (2002)
4. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Yasuko YANAGIDA, Eiry KOBATAKE and Masuo AIZAWA, Cellular biosensing system in response to drug stimuli, *10<sup>th</sup> Intelligent Materials Symposium of Japan*, (2001)
5. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Yasuko YANAGIDA, Eiry KOBATAKE and Masuo AIZAWA, Construction of the cellular biosensing system for assessment of drugs for the nervous system, *32<sup>nd</sup> Chemical Sensor Symposium of Japan* (2001)
6. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Eiry KOBATAKE and Masuo AIZAWA, Cellular biosensing system based on electrochemical monitoring of nitric oxide, *30<sup>th</sup> Chemical Sensor Symposium of Japan* (2000)
7. Ken-ichiro KAMEI, Tetsuya HARUYAMA, Yasuko YANAGIDA, Eiry KOBATAKE and Masuo

AIZAWA, Construction of *in situ* NO sensor with radical scavenger, 26<sup>th</sup> *Chemical Sensor Symposium of Japan* (1998)

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***PATENT APPLICATIONS***

1. Provisional Application, Microfluidic platform for cell culture and assay, UCLA Case No. 2007-067. (Disclosure date: August 4, 2006)
  2. Provisional Application, Microfluidic Cell Culture Array for Drug Screening and Imaging Probe Discovery, UCLA Case No. 2007-562 (Disclosure date; April 13, 2007)
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***REFERENCES***

**Hsian-Rong TSENG**, Ph.D, Department of Molecular & Medical Pharmacology, The University of California Los Angeles

**Harvey R. HERSCHMAN**, Ph.D, Department of Molecular & Medical Pharmacology, The University of California Los Angeles

**Masuo AIZAWA**, Ph.D, President, Tokyo Institute of Technology

**Eiry KOBATAKE**, Ph.D, Department of Biological Information, Tokyo Institute of Technology

**Tetsuya HARUYAMA**, Ph.D, Department of Biological Functions and Engineering, Kyusyu Institute of Technology