

## Curriculum Vitae

Name Family Name: Ikehata

First Name : Masateru

Date of birth: February 11, 1968

Nationality: Japan

Sex: Male

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### **EDUCATION**

- April, 1986- Tokyo University of Agriculture and Technology Tokyo, Japan  
March, 1990 Bachelor of Engineering (B. Eng.) in Applied Chemistry with specialization in biotechnology.
- April, 1998- Graduate school of Technology, Tokyo University of Agriculture and  
March, 2001 Technology. Tokyo, Japan  
Doctor of Philosophy (Ph. D) in Biotechnology. Thesis entitled  
“Effects of strong magnetic fields on gene expression and mutation”.

### **RESEARCH EXPERIENCE**

- April, 1990-Present Railway Technical Research Institute, Tokyo, Japan
- Biotechnology laboratory (1998-present)
- In present, Senior researcher of Biotechnology laboratory and conduct research of biological effects of EMFs.
- Environmental biotechnology laboratory (1994-1998)
  - Magneto-biology laboratory (1990-1994)

### **AWARD**

2002 Young Scientist Award of URSI(International Union of Radio Science)

### **MEMBERSHIP OF PROFESSIONAL BODIES**

Institute of Electrical and Electronics Engineers (IEEE), member  
Environmental Mutagen Society Japan, member  
Japan Society for Occupational Health, Council member  
Institute of Electrical Engineers of Japan (IEEJ), member  
Japan Magnetic Society, member  
Japanese Society for Hygiene, member  
Japan Radiation Research Society, member  
Japan Bioelectromagnetics Society, member

### **Committee**

International Electromagnetic Safety Committee (TC95 in IEEE), member  
URSI-K, Japanese National Committee, secretary  
Research committee of IEEJ, member of three committees  
Committee for Regulation of Magnetic field in railway field of MLIT, member  
Sub-committee of Localized absorption guidance of MIC, member  
Information supply committee supported by METI, member  
IEC PT62597 : Measurement procedures of magnetic field levels generated by electronic and electrical apparatus in the railway environment with respect to human exposure, expert

### **Teaching Experience**

2007- Adjunct instructor of Teikyo University of Science

## List of Publication

### Original paper

Yoshie S, Ikehata M, Hirota N, Takemura T, Minowa T, Hanagata N, Hayakawa T. Evaluation of mutagenicity and co-mutagenicity of strong static magnetic fields up to 13 Tesla in *Escherichia coli* deficient in superoxide dismutase. *J Magn Reson Imaging*. 2012 Mar;35(3):731-6.

Takagi R, Suzuki Y, Seki Y, Ikehata M, Kajihara C, Shimizu H, Yanagisawa H. Indium chloride-induced micronuclei in in vivo and in vitro experimental systems. *J Occup Health*. 2011;53(2):102-9.

M. Ikehata, S. Yoshie, N. Hirota and T. Hayakawa, Effects of Static Magnetic Field on Mutagenesis in *in vitro*, *Journal of Physics: Conference Series*, 156 (2009), 012015

S. Nakasono, M. Ikehata, M. Dateki, S. Yoshie, T. Shigemitsu, T. Negishi, Intermediate frequency magnetic fields do not have mutagenic, co-mutagenic or gene conversion potentials in microbial genotoxicity tests, *Mut. Res.*, 649, (2008), 187-200

Y. Suzuki, Y. Toyama, Y. Miyakoshi, M. Ikehata, H. Yoshioka and H. Shimizu, Effects of static magnetic fields on the induction of micronuclei by some mutagens, *Environ. Health Prev. Med*. 11, (2006), 226–230.

Y. Takashima, J. Miyakoshi, M. Ikehata, M. Iwasaka, S. Ueno, T. Koana, Genotoxic Effects of Strong Static Magnetic Fields in DNA-Repair Defective Mutants of *Drosophila melanogaster*, *J Radiat. Res.*, 45, (2004), 393-7.

M. Iwasaka, M. Ikehata, J. Miyakoshi and S. Ueno, Strong static magnetic field effects on yeast proliferation and distribution, *Bioelectrochemistry*, 65, (2004), 59-68.

N. Hirota, M. Kurashige, M. Iwasaka, M. Ikehata, H. Uetake, T. Takayama, H. Nakamura, Y. Ikezoe, S. Ueno and K. Kitazawa, Magneto-Archimedes separation and its application to the separation of biological materials, *Physica B: Condensed Matter*, 346-347, (2004), 267-271.

T. Yamada, Y. Hiraoka, M. Ikehata, K. Kimbara, B.S. Avner, T. K. Das Gupta, A.M. Chakrabarty, Apoptosis or growth arrest: Modulation of tumor suppressor p53's specificity by bacterial redox protein azurin., *Proc Natl Acad Sci U S A.*, 101, (2004) 4770-5.

T. Koana, Y. Takashima, M.O. Okada, M. Ikehata, J. Miyakoshi, K. Sakai, A threshold exists in the dose-response relationship for somatic mutation frequency induced by X irradiation of *Drosophila*., *Radiat Res.*, 161, (2004) 391-6.

Y. Takashima, M. Ikehata, J. Miyakoshi, T. Koana., Inhibition of UV-induced G1 arrest by exposure to 50 Hz magnetic fields in repair-proficient and -deficient yeast strains., *Int J Radiat Biol.*, 79, (2003) 919-24.

M. Ikehata, M. Iwasaka, J. Miyakoshi, S. Ueno, T. Koana, Effects of intense magnetic fields on sedimentation pattern and gene expression profile in budding yeast, *J. Appl. Phys.*, 93, (2003) 6724-6.

M. Ikehata, Y. Takashima, Y. Suzuki, H. Shimizu, J. Miyakoshi and T. Koana, Exposure to a power frequency magnetic field (50 Hz, 40 mT) did not cause point mutation in bacteria, *Environ. Mut. Res.*, 23, (2001) 215-222.

Y. Suzuki, M. Ikehata, K. Nakamura, M. Nishioka, K. Asanuma, T. Koana, H. Shimizu, Induction of micronuclei in mice exposed to static magnetic fields, *Mutagenesis*, 16, (2001) 499-501.

T. Koana, M.O. Okada, Y. Takashima, M. Ikehata and J. Miyakoshi, Involvement of eddy currents in the mutagenicity of ELF magnetic fields, *Mut. Res.* 476 (2001) 55-62.

S. Nakasono, M. Ikehata, T. Koana and H. Saiki, A 50 Hz, 14 mT magnetic field is not mutagenic or co-mutagenic in bacterial mutation assays, *Mut. Res.* 471 (2000) 127-134.

Y. Takashima, M.O. Okada, M. Ikehata, T. Koana and J. Miyakoshi, Mutagenic effects of static magnetic fields on DNA repair defective mutants in *Drosophila melanogaster*, *J. Japan Biomagnetism and Bioelectromagnetics Society*, 13, (2000), 27-32 (in Japanese).

M. Ikehata, T. Koana, Y. Suzuki, H. Shimizu and M. Nakagawa, Mutagenicity and co-mutagenicity of static magnetic fields detected by bacterial mutation assay, *Mut. Res.* 427 (1999) 147-156.

T. Koana, M. Okada, M. Ikehata, M. Nakagawa, Increase in the mitotic recombination frequency in *Drosophila melanogaster* by magnetic field exposure and its suppression by vitamin E supplement, *Mut. Res.* 373 (1997) 55-60.

T. Koana, M. Ikehata, M. Nakagawa, Estimation of genetic effects of a static magnetic field by a somatic cell test using mutagen-sensitive mutants of *Drosophila melanogaster*, *Bioelectrochem. Bioenerg.* 36 (1995) 95-100.

#### Book chapter, etc.

M. Ikehata, T. Koana, M. Nakagawa, Effect of strong static magnetic fields on mutagenicity of chemical mutagens in bacterial mutation assay, *Electricity and Magnetism in Biology and Medicine*, Edited by F. Bersani (1999) Plenum Publishers, New York, USA.

M. Nakagawa, M. Ikehata, T. Koana, Public health on electromagnetic fields and magnetic shield of linear motorcar (EDS) MAGLEV, *Biological effects of magnetic and electromagnetic fields*, Edited by S. Ueno (1996) Plenum Press, New York, USA.