10. List of Original Papers

This list includes main publications by the staff members issued during the period from April 1, 2005 to March 31, 2006

****Outside Co-research***

○ ***Research Center for Rradiation Safety***

Low Dose Radiation Effects Research Project

1. Yutaka Tokairin*, Shizuko Kakinuma, Masami Arai*, Mayumi Nishimura, Mieko Okamoto*, Makoto Akashi, Yoshio Miki*, Tatsuyuki Kawano*, Yoshiya Shimada: Accelerated growth of intestinal tumours after radiation exposure in Mlh1-knockout mice: evaluation of the late effect of radiation on a mouse model of HNPCC, International Journal of Experimental Pathology, 87, 89-99, 2005
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5. Sugaya, K., Hongo, E., and Tsuji, H. A temperature-sensitive mutation in the WD repeat-containing protein Smu1 is related to maintenance of chromosome integrity. Exp. Cell Res., 306, 242-251, 2005.
6. Nakajima, T., Yukawa, O., Tsuji, H., Ohyama, H., Wang, B., Tatsumi, K., Hayata, I., and Hama-Inaba, H., Regulation of radiation-induced protein kinase C δ activation in radiation-induced apoptosis differs between radiosensitive and radioresistant mouse thymic lymphoma cell lines. Mutat. Res., 595, 29-36, 2006.
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10. Takeshi Yasuda, Kaoru Sugasawa, Yuichiro Simizu, Sigenori Iwai, Tadahiro Shiomi, Fumio Hanaoka: Nucleosomal structure of undamaged DNA regions suppresses the non-specific DNA binding of the XPC complex, DNA Repair, 4, 389-395, 2005.
11. Atsushi Tsuji, Aya Sugyou, Toshiaki Ogiu, Masashi Sagara, Tomo Suga, Atsuko Ishikawa, Hitomi Sudou, Marika Ohtuki, Hiroyuki Aburatani*, Takashi Imai, Yoshinobu Harada: Fine Mapping of Radiation Susceptibility and Gene Expression Analysis of LEC Congenic Rat Lines, Genomics, 86, 271-279, 2005
12. Atsushi Tsuji, Aya Sugyo, Hitomi Sudou, Masashi Sagara, Atsuko Ishikawa, Marika Ohtuki, Tomo Kimura, Toshiaki Ogiu, Makoto Miyagishi*, Kazunari Taira*, Takashi Imai, Yoshinobu Harada: Defective repair of radiation-induced DNA damage is complemented by a CHORI-230-65K18 BAC clone on rat chromosome 4, Genomics, 87(2), 236-242, 2006

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(***International Space Radiation Laboratory***)

1. Takeshi Yaoi*, Kumie Nojima, Shinji Fushiki*, et.al: Prenatal Low-dose X-irradiation Affects Connexins 43 and 26 in Developing Mouse Neocortex, Acta Histochemica et Cytochemica, 38(3), 223-228, 2005
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15. Masashi Takada, Mamoru Baba*, Hiroshi Yamaguchi, Kazunobu Fujitaka: Differential absorbed dose distributions in lineal energy for neutrons and gamma rays at the mono-energetic neutron calibration facility, Radiation Protection Dosimetry, 114(4), 481-490, 2005
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Establishment of radiation protection system against radioactive materials released into the environment

（*Environmental Radiation Protection Research Group*）

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and Planetary Science Letters, 233(3-4), 441-453, 2005
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Environmental and Toxicological Research Group

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Studies on environmental radon and its biological effects

（***Radon Research Group***）

1. Tetsuo Ishikawa: Performance of a whole-body counter with five high-purity germanium detectors, Applied Radiation and Isotopes, 64(3), 386-389, 2006
2. Fumihiro Saito, Shinya Furuichi*, Naureen Rahman, Takao Iida*, Jun Koarashi: A new method for measuring particle size distribution of radon decay products using imaging plate, Japanese Journal of Health Physics, 40(2), 177-182, 2005
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Research on redox regulation against radiation

（***Redox Regulation Research Group***）

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5. Keizo Takeshita, Chi Cuiping, Toshihiko Ozawa, et.al: In vivo generation of free radicals in the skin of live mice under ultraviolet light, measured by L-band EPR spectroscopy, Free Radical Biology and Medicine, 40, 876-885, 2006
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Basic study of radiation hazards
(***Radiation Hazard Research Group***)

1. Masahiro Murakami, Issay Narumi, Katsuya Satoh*, Akira Furukawa, Isamu Hayata: Analysis of interaction between DNA and Deinococcus radiodurans PprA protein by Atomic force microscopy, Biochimica et Biophysica Acta. Proteins and Proteomics, 1764, 20-23, 2006
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10. Kazuko Yoshida, et.al: Mutations of the PU.1

Ets domain are specifically associated with murine radiation-induced, but not human therapy-related, acute myeloid leukaemia, Oncogene, 24, 3678-3683, 2005
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Analysis of gene networks in response to ionizing radiation

（***Transcriptome Profiling Research Group***）

1. Hideshi Ishii*, Taeko Inageta*, Koshi Mimori*, Toshiyuki Saito, Hiroki Sasaki*, Masaharu Isobe*, Masaki Mori*, Carlo M. Croce*, Kay Huebner*, Keiya Ozawa*, Y. Furukawa*: Frag1, a homolog of alternative replication factor C subunits, links replication stress surveillance with apoptosis., Proceedings of the National Academy of Sciences of the United States of America, 102, 9655-9660, 2005

Development of Experimental Animals for Research on the Biological Effects of Radiation

（***Laboratory Animal Research Group***）

1. Seiji Kito, Yuki Oota: Medium Effects on Capacitation and Sperm Penetration Through the Zona Pellucida in Inbred BALB/c Spermatozoa, Zygote, 13(2), 145-153, 2005

○ *Research Center for Radiation Emergency Medicine*

The study for Radiation Emergency Medical Preparedness

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○ *Research Center for Charged Particle Therapy*

Heavy Ion Clinical Trial

（***Hospital***）

1. Aki Hirai*, Atsushi Mizota*, Seiichiro Mine*, Junetsu Mizoe: Two cases of orbital adenocarcinoma treated with heavy charged carbon particle irradiation, Graefe's Archive for Clinical and Experimental Ophthalmology, 243, 610-614, 2005
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5. Azusa Hasegawa, Junetsu Mizoe, Atsushi Mizota, Hirohiko Tsujii: Outcomes of visual acuity in carbon ion radiotherapy:analysis of dose-volume histograms and prognostic factors, International Journal of Radiation Oncology Biology Physics, 64(2), 396-401, 2006
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Development of four-dimensional CT (4D CT)
(***Department of Medical Physics***)

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