

Departmental Summary about Publications, List of Publications and Meeting Presentations

1) Departmental Summary about Publications:

1.	# publications (including in-press) in 2023–present on which at least one departmental member was listed as an author or co-author	4 (1)
2.	# publications (including in-press) in 2023–present originating in your department	2
3.	# publications in #1-2 above with first author in the department	3
4.	# publications in #2 with outside investigator as first author	0
5.	# publications in #2 linked to RPs	2

* Total number of publications, with number in the Japanese language given in parenthesis.

2) List of Publications:

<2023 - Current>

1. Hayashi T, Kato N, Furudoi K, Hayashi I, Kyoizumi S, Yoshida K, Kusunoki Y, Furukawa K, Imaizumi M, Hida A, Tanabe O, Ohishi W: Early-life atomic-bomb irradiation accelerates immunological aging and elevates immune-related intracellular reactive oxygen species. *Aging Cell*, 2023; 22: e13940 [RP4-02, RP3-07, RP2-11]
2. Matsuda Y, Uchimura A, Satoh Y, Kato N, Toshishige M, Kajimura J, Hamasaki K, Yoshida K, Hayashi T, Noda A, Tanabe O: Spectra and characteristics of somatic mutations induced by ionizing radiation in hematopoietic stem cells. *Proc Natl Acad Sci U S A*, 2023; 120: e2216550120 [RP-P3-19]
3. Tanabe O: Biorepository of atomic bomb survivors and their offspring. *Hiroshima Igaku*, 2023; in press [RP3-15]
4. Yoshida K, Misumi M, Yamaoka M, Kyoizumi S, Ohishi W, Sugiyama H, Hayashi T, Kusunoki Y: Naïve CD4 T cells highly expressing the inflammatory chemokine receptor CXCR3 increase with age and radiation exposure in atomic bomb survivors. *Radiat Res*, 2023; in press [RP-P1-22]

<2022 >

1. Pugh JL, Coplen CP, Sukhina AS, Uhrlaub JL, Padilla-Torres J, Hayashi T, J Nikolich-Zugich: Lifelong cytomegalovirus and early-life irradiation synergistically potentiate age-related defects in response to vaccination and infection. *Aging Cell*; 2022; 21: e13648 [RP4-09]

2. Sugawara J, Ishikuro M, Obara T, Onuma T, Murakami K, Kikuya M, Ueno F, Noda A, Mizuno S, Kobayashi T, Hamanaka Y, Suzuki K, Kodama E, Tsuchiya N, Uruno A, Suzuki Y, Tanabe O, Kiyomoto H, Tsuboi A, Shimizu A, Koshiba S, Minegishi N, Ogishima S, Tamiya G, Metoki H, Hozawa A, Fuse N, Kinoshita K, Kure S, Yaegashi N, Kuriyama S, Yamamoto M: Maternal baseline characteristics and perinatal outcomes: The Tohoku Medical Megabank Project Birth and Three-Generation Cohort Study. *J Epidemiol*, 2022; 32: 69-79 [no RP]
3. Yoshida K, Satoh Y, Uchimura A, Misumi M, Kyoizumi S, Taga M, Matsuda Y, Noda A, Kusunoki Y: Massive expansion of multiple clones in the mouse hematopoietic system long after whole-body X-irradiation. *Sci Rep*. 2022; 1:17276 [RP1-08, RP1-23-3]

<2021>

1. Hayashi T, Furukawa K, Morishita Y, Hayashi I, Kato N, Yoshida K, Kusunoki Y, Kyoizumi S, Ohishi W: Intracellular reactive oxygen species level in blood cells of atomic bomb survivors is increased due to aging and radiation exposure. *Free Radical Biol Med*, 2021; 171: 126-134 [RP4-02, RP3-07, RP2-75, RP2-11]
2. Hozawa A, Tanno K, Nakaya N, Nakamura T, Tsuchiya N, Hirata T, Narita A, Kogure M, Nochioka K, Sasaki R, Takanashi N, Otsuka K, Sakata K, Kuriyama S, Kikuya M, Tanabe O, Sugawara J, Suzuki K, Suzuki Y, Kodama EN, Fuse N, Kiyomoto H, Tomita H, Uruno A, Hamanaka Y, Metoki H, Ishikuro M, Obara T, Kobayashi T, Kitatani K, Takai-Igarashi T, Ogishima S, Satoh M, Ohmomo H, Tsuboi A, Egawa S, Ishii T, Ito K, Ito S, Taki Y, Minegishi N, Ishii N, Nagasaki M, Igarashi K, Koshiba S, Shimizu R, Tamiya G, Nakayama K, Motohashi H, Yasuda J, Shimizu A, Hachiya T, Shiwa Y, Tominaga T, Tanaka H, Oyama K, Tanaka R, Kawame H, Fukushima A, Ishigaki Y, Tokutomi T, Osumi N, Kobayashi T, Nagami F, Hashizume H, Arai T, Kawaguchi Y, Higuchi S, Sakaida M, Endo R, Nishizuka S, Tsuji I, Hitomi J, Nakamura M, Ogasawara K, Yaegashi N, Kinoshita K, Kure S, Sakai A, Kobayashi S, Sobue K, Sasaki M, Yamamoto M: Study profile of the Tohoku Medical Megabank Community-Based Cohort Study. *J Epidemiol*, 2021; 31: 65-76 [no RP]
3. Noda A, Kato K, Tamura C, Biesecker LG, Imaizumi M, Inoue Y, Henderson GE, Wilford B, Muto K, Naito M, Kayukawa J: Ethical, legal and social implications of human genome studies in radiation research: A workshop report for studies on atomic bomb survivors at the Radiation Effects Research Foundation. *J Radiat Res*, 2021; 62: 656-661 [no RP]
4. Saito S, Aoki Y, Tamahara T, Goto M, Matsui H, Kawashima J, Danjoh I, Hozawa A, Kuriyama S, Suzuki Y, Fuse N, Kure S, Yamashita R, Tanabe O, Minegishi N, Kinoshita K, Tsuboi A, Shimizu R, Yamamoto M: Oral microbiome analysis in prospective genome cohort studies of the Tohoku Medical Megabank Project. *Front Cell Infect Microbiol*, 2021; 10: 604596 [no RP]
5. Yamauchi T, Ochi D, Matsukawa N, Saigusa D, Ishikuro M, Obara T, Tsunemoto Y,

Kumatani S, Yamashita R, Tanabe O, Minegishi N, Koshiba S, Metoki H, Kuriyama S, Yaegashi N, Yamamoto M, Nagasaki M, Hiyama S, Sugawara J: Machine learning approaches to predict gestational age in normal and complicated pregnancies via urinary metabolomics analysis. *Sci Rep*, 2021; 11: 17777 [no RP]

3) Meeting presentations for 2023:

1. Hayashi T, Tanabe O: Studies of Radiation Effects Research Foundation and management system for biospecimens at the Biosample Research Center. CIBER Biobank Technical Webinar, 14 Dec. 2023, online [RP3-15]
2. Hayashi T, Kato N, Tanimoto K, Maki M, Morishita Y, Yoshida N, Tanabe O, Ohishi W: Study of amplification methods for SNP analysis of DNA derived from blood smears preserved for more than 50 years. 46th Annual Meeting of the Molecular Biology Society of Japan, 6-8 Dec. 2023, Kobe, Japan [RP-P2-22]
3. Matsuda Y, Uchimura A, Satoh Y, Kato N, Toshishige M, Kajimura J, Hamasaki K, Yoshida K, Hayashi T, Noda A, Tanabe O: Mutational signatures of ionizing radiation in mouse hematopoietic stem cells. 46th Annual Meeting of the Molecular Biology Society of Japan, 6-8 Dec. 2023, Kobe, Japan [RP-P3-19]
4. Matsuda Y, Uchimura A, Satoh Y, Kato N, Toshishige M, Kajimura J, Hamasaki K, Yoshida K, Hayashi T, Noda A, Tanabe O: Analysis of somatic mutations and clonal dynamics of mouse hematopoietic stem cells after whole-body X-irradiation by whole-genome sequencing. 52nd Annual Meeting of the Japanese Environmental Mutagen and Genome Society, 11 Nov. 2023, Fukuoka, Japan [RP-P3-19]
5. Hayashi T, Kato N, Furudoi K, Hayashi I, Kyoizumi S, Tanimoto K, Yoshida K, Imaizumi M, Hida A, Tanabe O, Ohishi W: Early-life irradiation accelerates immunological aging and elevates immune-related intracellular reactive oxygen species. 66th Annual Meeting of the Japanese Radiation Research Society 6-8 Nov. 2023, Tokyo, Japan [RP4-02, RP3-07, RP2-75, RP2-11]
6. Matsuda Y, Uchimura A, Satoh Y, Kato N, Toshishige M, Kajimura J, Hamasaki K, Yoshida K, Hayashi T, Noda A, Tanabe O: Somatic mutations and clonal proliferation induced in mouse hematopoietic stem cells by X-irradiation. 66th Annual Meeting of the Japanese Radiation Research Society, 6-8 Nov. 2023, Tokyo, Japan [RP-P3-19]
7. Matsuda Y, Uchimura A, Satoh Y, Kato N, Toshishige M, Kume K, Kajimura J, Hamasaki K, Yoshida K, Hayashi T, Noda A, Tanabe O: Genome-wide analysis of radiation-induced somatic mutations in mouse long-term hematopoietic stem cells. 75th American Society of Human Genetics, 1-5 Nov. 2023, Washington DC, USA [RP-P3-19]
8. Matsuda Y, Uchimura A, Satoh Y, Kato N, Toshishige M, Kajimura J, Hamasaki K, Yoshida K, Hayashi T, Noda A, Tanabe O: Somatic mutations induced by whole-body X-irradiation in mouse hematopoietic stem cells and their clonal expansion. 85th Annual Meeting of the Japanese Society of Hematology, 13-15 Oct. 2023, Tokyo, Japan [RP-P3-19]

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9. Matsuda Y, Uchimura A, Satoh Y, Kato N, Toshishige M, Kajimura J, Hamasaki K, Yoshida K, Hayashi T, Noda A, Tanabe O: Genome-wide frequencies and signatures of somatic mutations introduced by whole-body X-irradiation in mouse long-term hematopoietic stem cells. 17th International Congress for Radiation Research, 27-30 Aug. 2023, Montreal, Canada [RP-P3-19]
 10. Matsuda Y, Uchimura A, Satoh Y, Kato N, Toshishige M, Kajimura J, Hamasaki K, Yoshida K, Hayashi T, Noda A, Tanabe O: Analysis of radiation-induced mutational signatures in mouse long-term hematopoietic stem cells by whole-genome sequencing. 47th Annual Meeting of the Chugoku Area Radiation Research Society, 18 Aug. 2023, Hiroshima, Japan [RP-P3-19]
 11. Tanabe O: Biorepository of atomic bomb survivors and their offspring. *In workshop: Toward archiving materials and samples of A-bomb survivors*. 63rd Research Conference of Atomic Bomb Disease, 4 Jun. 2023, Hiroshima, Japan [RP3-15]
 12. Hayashi T, Kato N, Maki M, Morishita Y, Yoshida N, Tanabe O, Ohishi W: Preliminary study for SNP array analysis of DNA derived from blood smears stored for more than 50 years. International Society for Biological and Environmental Repositories Annual Meeting and Exhibits, 3-6 Mar. 2023, Seattle, Washington, USA [RP-P2-22]