

FY2023 Adopted Joint Usage/Research Projects (As of April 24, 2023)

Joint Research Title	Joint Researcher (Representative)	Affiliated Organization	Resident Researcher (Representative)	Affiliated Organization	New · Conti.
<b>【Projects responding to Fukushima Nuclear Power Plant accident】</b>					
1. Research on low-dose and low-dose rate radiation effects					
Role of tumor microenvironment in radiation-induced tumor	Tsutomu Shimura	National Institute of Public Health	Kenji Kamiya	Hiroshima University	Conti.
The analysis of the specific mutational signatures induced by low-dose(-rate) irradiation using a SV-NGS method.	Hidehiko Kawai	Hiroshima University	Megumi Sasatani	Hiroshima University	Conti.
Investigation of the effects of chronic exposure of low dose radiation on animal health	MURATA TAKAHISA	The University of Tokyo	Osamu Kaminuma	Hiroshima University	Conti.
Genome-wide analysis for the transgenerational effects of low-dose radiation exposure	Uchimura Arikuni	Radiation Effects Research Foundation	Osamu Kaminuma	Hiroshima University	Conti.
Radiation exposure and the resulting risk of genomic destabilization	Ken-ichi Yoshioka	National cancer center research institute	Satoshi Tashiro	Hiroshima University	Conti.
Understanding of the impact of discharged wastewater to rainfall over Japan	Kurita, Naoyuki	Nagoya University, Tokai National Higher Education and Research System	Hiroshi Yasuda	Hiroshima University	Conti.
Biological effects of low-dose/low-dose-rate exposure on stem cells	Daisuke IIZUKA	National Institutes for Quantum Science and Technology	Megumi Sasatani	Hiroshima University	Conti.
Simulation studies to reinforce the interpretation of the differences between results of animal experiments and epidemiological studies	Doi Kazutaka	National Institute for Quantum Science and Technology	Megumi Sasatani	Hiroshima University	Conti.
Simulation studies to evaluate the impact of confounding factors on risk estimates in low dose and dose rate radiation	Doi Kazutaka	National Institute for Quantum Science and Technology	Shinji Yoshinaga	Hiroshima University	Conti.
Development of an analytical method to quantitatively evaluate biological effects caused by low-dose or low-dose-rate irradiation	Nobuhiro Morishima	RIKEN	Kenji Kamiya	Hiroshima University	Conti.
High sensitivity analysis of DNA damage induced by ionizing radiation of low dose and low dose rate	Hiroaki Terato	Okayama University	Hiroshi Yasuda	Hiroshima University	Conti.
Analysis of the effects of Pb-210 and Po-210 ingested through food on the incidence of human cancer	YU CAI	The University of Tokyo	Shinji Yoshinaga	Hiroshima University	New
Assessing Dose of Representative Persons in the Environment focusing on Naturally Occurring Radioactive Materials	Hiromi Koike	The University of Tokyo	Seiko Hirota	Hiroshima University	Conti.

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Construction of a low-concentration exposure field simulates the natural environment	Aoi Sampei	Hirosaki University	Tetsuo Ishikawa	Fukushima Medical University	New
Relationship of oxidative stress with cellular responses under low dose rate irradiation	Junya Kobayashi	International University of Health and Welfare	Shinya Matsuura	Hiroshima University	Conti.
Factor analysis on the effects of radiation disasters on obesity in children in Fukushima Prefecture.	Shobugawa Yugo	Niigata University	Tetsuya Ohira	Fukushima Medical University	Conti.
Retaining of labels and DNA damage in rat mammary gland	Tatsuhiko Imaoka	Natl Institutes for Quantum Science and Technology	Keiji Suzuki	Nagasaki University	Conti.
Effect of low-dose/low-dose-rate radiation exposure on Th1/Th2 balance in mice	Eiji TAKAYAMA	Asahi University School of Dentistry	Tatsuo Ichinohe	Hiroshima University	Conti.
Analysis of somatic mutation induction by using a hyper-sensitive system	Hiroshi Tauchi	Ibaraki University	Keiji Suzuki	Nagasaki University	Conti.
The tenth-year decontamination after Fukushima accident	Satoru Nakashima	Hiroshima University	Yu Abe	Nagasaki University	Conti.
Histopathological examination of juvenile thyroid cancer in the area around Chernobyl and in Japan	Masahiro Ito	NHO Nagasaki Medical Center	Masahiro Nakashima	Nagasaki University	Conti.
Gender and p53 differences in life span extension by radiation adaptive response	Ryuji Okazaki	University of Occupational and Environmental Health, Japan	Keiji Suzuki	Nagasaki University	New
Live cell imaging using a genetic probe for detection of radiation effects	Kensuke Otsuka	Central Research Institute of Electric Power Industry	Keiji Suzuki	Nagasaki University	Conti.
Suppressive effect of low-dose X-ray on cell death in cerebral ischemia-reperfusion model	Kato Shinsuke	Yokohama University of Pharmacy	Yu Abe	Nagasaki University	New
The study of DNA damage accumulation in response to long-term low-dose/low-dose rate radiation exposure	Masatoshi Suzuki	Tohoku University	Keiji Suzuki	Nagasaki University	Conti.
Risk assessment of carcinogenesis due to exposure to tritiated water using a mouse model with high susceptibility to carcinogenesis.	Toshiyuki Umata	University of Occupational and Environmental Health, Japan	Kenji Kamiya	Hiroshima University	Conti.
Effect of mesenchymal stem cells on radiation-induced tissue injury	Nakashima Ayumu	Hiroshima University	Yukihito Higashi	Hiroshima University	Conti.

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【Projects responding to Fukushima Nuclear Power Plant accident】

2.Development of diagnostic and treatment methods for internal radiation exposure

Exploration of biomarkers for the differential diagnosis of follicular thyroid cancer and novel drug-targeted molecules for their treatment	Osamu Ishibashi	Osaka Metropolitan University	Satoshi Tashiro	Hiroshima University	Conti.
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【Projects responding to Fukushima Nuclear Power Plant accident】

3.Research and development of radiation-protective drugs

Experimental studies on radiation and Curcumin analogues, GO-Y030, GO-Y022 and GO-Y078. Molecular mechanisms of radioresistance and radiosensitivity in human cancer cells.	Eiko Nakata	International University of Health and Welfare	Shinya Matsuura	Hiroshima University	Conti.
Phytochemical analysis of herbs for discovering radioprotectants	Katsuyoshi Matsunami	Hiroshima University	Satoshi Tashiro	Hiroshima University	Conti.
Verification of the effect of cyclodextrin on reducing the absorption of radioactive iodine into the body	Shigeki Ito	Kumamoto University	Kodai Nishi	Nagasaki University	Conti.

【Projects responding to Fukushima Nuclear Power Plant accident】

4.Research on risk communication regarding radiation disasters

Evaluation study of changes in physical, psychological, and social risk factors that influence health behavior	Takahiro TABUCHI	Osaka International Cancer Institute	Tetsuya Ohira	Fukushima Medical University	Conti.
An analytical study on the tendency of information dissemination and acquisition about nuclear before and after a radiation disaster	Takeshi IIMOTO	The University of Tokyo	Hiroshi Yasuda	Hiroshima University	Conti.
Cohort Study on Long-term Group Living Conditions and Maintenance of Physical Ability of Affected Elderly People in Public Housing (Idobata Nagaya) in Soma Area after the 2011 Great Japan East Earthquake	Saito Hiroaki	Soma Central Hospital	Masaharu Tsubokura	Fukushima Medical University	New
Association between parity status and after great disaster psychological stress tolerance	Yasukawa Sumiyo	Faculty of Health Sciences, Okayama University Institute of Academic and Research	Tetsuya Ohira	Fukushima Medical University	Conti.
Study for searching radioprotector/radiosensitizer using plasmid DNA damage as indicator	Katrunori Yogo	Nagoya University	Hiroshi Yasuda	Hiroshima University	Conti.

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A survey of medicines' demands of Minamisoma Municipal General Hospital affected by triple disaster after the Great East Japan Earthquake.	Takanao Hashimoto	Kenkodo Pharmacy	Masaharu Tsubokura	Fukushima Medical University	Conti.
Effectiveness of educational workshops including risk communication for Fukushima nuclear power plant workers	Ryuji Okazaki	University of Occupational and Environmental Health, Japan	Seiji Yasumura	Fukushima Medical University	New
Case studies of public health activities in evacuated areas and surrounding areas after the Fukushima Daiichi Nuclear Power Plant accident	Yoshitaka Nishikawa	Kyoto University	Seiji Yasumura	Fukushima Medical University	Conti.
Survey on Disaster-Related Deaths in the Soso area after the Fukushima Daiichi nuclear power plant accident	Toyoaki Sawano	Jyoban Hospital of Tokiwa Foundation	Masaharu Tsubokura	Fukushima Medical University	New
Survey of health effects and issues during and after emergency evacuation of vulnerable people in the Soso area after the Great East Japan Earthquake	Saori Nonaka	Minamisoma Municipal General Hospital	Masaharu Tsubokura	Fukushima Medical University	Conti.
Archiving local government responses in Tokyo metropolitan area in the face of environmental contamination by nuclear accident - A case of Kashiwa City, Chiba Prefecture	OKURA, Masahiro	The University of Tokyo	Akiko Kubota	Hiroshima University	New
Ethical Challenges in Health and Disaster Research	Sudeepa Abeysinghe	University of Edinburgh	Aya Goto	Fukushima Medical University	Conti.
Fostering " Dietary Choice " of Elementary School Students: The Next Generation of Shokuiku in Fukushima Prefecture after the Fukushima Nuclear Accident	Satoko Okabe	Koriyama Women's University	Aya Goto	Fukushima Medical University	Conti.
Research on the incidence and death of diseases and their distribution of evacuees and returnees after the Great East Japan Earthquake	SUN ZHICHAO	National Cerebral and Cardiovascular Center	Tetsuya Ohira	Fukushima Medical University	Conti.
A Proposal for Risk Management Methods in Local Governments: The Case of Kashiwa City, Chiba Prefecture	Hashima Shun	The University of Tokyo	Akiko Kubota	Hiroshima University	New
Clarifying the influence of latent damage of thyroid on the sensitivity of thyroid hormone in pituitary gland	Yuji Shimizu	Nagasaki University	Naomi Hayashida	Nagasaki University	New
Innovative approaches to risk management in cancer screening in the territory affected by the Chernobyl nuclear power plant disaster	Tamara Sharshakova	Gomel State Medical University	Naomi Hayashida	Nagasaki University	New

【Other important projects】

1.Research on the molecular mechanisms of genomic damage and repair

Role of XRCC3 polymorphism in pathogenesis and progression of cardiac hypertrophy	Chiemi Sakai	Hiroshima University	Satoshi Tashiro	Hiroshima University	Conti.
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The analysis for the endoplasmic reticulum function altered by cellular stress.	Kazunori Imaizumi	Hiroshima University	Akiko Nagamachi	Hiroshima University	Conti.
Regulation of chromatin structures involved in repair of UV-induced DNA damage	Kaoru Sugawara	Kobe University	Satoshi Tashiro	Hiroshima University	Conti.
Analysis of ATM activation by delayed mitochondrial ROS	Genro Kashino	Nara Medical University	Keiji Suzuki	Nagasaki University	Conti.
Role of unrepaired DNA damages in the radiation induced mutagenesis	Noda Asao	Radiation Effects Research Foundation	Keiji Suzuki	Nagasaki University	Conti.
Time-lapse analysis of nuclear factors involved in DNA damage response and repair	Ken-ichi Yano	Kumamoto University	Keiji Suzuki	Nagasaki University	Conti.
Analysis of the role of histone H2AZ ubiquitination in genome maintenace	Kouji Hirota	Tokyo Metropolitan University	Satoshi Tashiro	Hiroshima University	Conti.
Molecular pathologic characteristics of benign thyroid nodules showing nodule in nodule morphology	Mayu Ueda	Nagasaki University	Katsuya Matsuda	Nagasaki University	Conti.
Role of DNA damage response in Metabolic dysfunction associated fatty liver disease	Yuko Akazawa	Nagasaki University Graduated School of Bionedical Sciences	Masahiro Nakashima	Nagasaki University	New
Analysis of genomic instability in breast cancer carcinogenesis by 53BP1 expression	Otsubo Ryota	Nagasaki University Hospital	Katsuya Matsuda	Nagasaki University	New
Analysis of DNA damage response molecular expression as a prognostic predictor of oropharyngeal cancer	Hideaki Nishi	Ngasaki University Hospital	Katsuya Matsuda	Nagasaki University	Conti.
Effects of radiation on development and aging in zebrafish	Hiromi Hirata	Aoyama Gakuin University	Yasuko Honjo	Hiroshima University	Conti.
Mechanism by which splicing factors promote repair of radiation-induced DNA double-strand breaks	Motohiro Yamauchi	Kyushu University	Keiji Suzuki	Nagasaki University	Conti.
Effects of phase separation of DNA double-strand break repair factors on the frequency of chromosome rearrangement	Kie Ozaki	Kyushu University	Yu Abe	Nagasaki University	Conti.
Analysis of the mechanisms involved in radiosentitivity of malignant glioma cells	Hama Seiji	Graduate School of Biomedical and Health Sciences, Hiroshima University	Shinya Matsuura	Hiroshima University	Conti.

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Wnt/ $\beta$ -catenin signal modulates DDR and EMT by dimethylation of histone H3K36 through NSD2 in hepatocellular carcinoma	Yasuaki Shibata	Nagasaki University Graduate School of Biomedical Sciences	Masahiro Nakashima	Nagasaki University	New
Novel responsible genes of diseases with genomic instability around the Chernobyl area	Tomoo Ogi	Nagoya University	Norisato Mitsutake	Nagasaki University	Conti.
53BP1 fluorescent staining expression as DNA damage response in the patients of superficial laryngopharyngeal squamous cell carcinoma	Tabuchi Maiko	Nagasaki University Hospital	Masahiro Nakashima	Nagasaki University	Conti.
Role of NBS1 protein in cellular responses to ionizing radiation	Hiroshi Tauchi	Ibaraki University	Shinya Matsuura	Hiroshima University	Conti.
Disruption mechanism of DSB-dependent chromatin regulation in response to decreased UBE3B expression	Okada Maiko	Tokyo University of Technology	Keiji Suzuki	Nagasaki University	New
The cancer risk of ulcerative colitis investigated by 53BP1 fluorescent staining.	Hashiguchi Keiichi	Nagasaki University Hospital	Masahiro Nakashima	Nagasaki University	Conti.
A study of induction-mechanisms of DNA double-strand breaks	Isao Kuraoka	Fukuoka university	Satoshi Tashiro	Hiroshima University	Conti.
Histone H3K36 methyltransferase functions in DNA repair	URA Kiyoe	Chiba University	Satoshi Tashiro	Hiroshima University	Conti.
Analysis of cellular function of polyubiquitinated PCNA	Masuda, Yuji	Nagoya University, Tokai National Higher Education and Research System	Megumi Sasatani	Hiroshima University	Conti.
Molecular mechanisms of DNA damage repair in the pathogenesis of cardiovascular diseases	Mari Ishida	Hiroshima University	Satoshi Tashiro	Hiroshima University	Conti.
Interaction between nuclear DNA damage and mitochondrial DNA damage	Mari Ishida	Hiroshima University	Satoshi Tashiro	Hiroshima University	Conti.
Studies on genomic damage caused by viral infection and radiation	Hironori Yoshiyama	Shimane University	Shinya Matsuura	Hiroshima University	Conti.
Elucidation of the role of Rif1 in DSB repair	Tomohiro Iguchi	Tokyo Metropolitan Institute of Medical Science	Osamu Kaminuma	Hiroshima University	Conti.

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Hypoxia signal and DNA damage response in aging	Bhawal Ujjal	Nihon University	Keiji Tanimoto	Hiroshima University	Conti.
Roles of epigenomic modification on DNA damage response under hypoxic conditions	Eisaburo Sueoka	Saga University	Keiji Tanimoto	Hiroshima University	Conti.
Histone H3K4me3 regulated by PTIP is required for the DNA damage response	Nakata Yuichiro	University of Miami	Osamu Kaminuma	Hiroshima University	Conti.
Roles of the hypoxia-inducible factor- $\alpha$ in radiation sensitivity	Yuichi Makino	Asahikawa Medical University	Keiji Tanimoto	Hiroshima University	Conti.
Transcriptome analyses of radiation responses in hypoxia by using public database	Hiomasa Ono	Research Organization of Information and Systems	Keiji Tanimoto	Hiroshima University	Conti.
The role of TIP60 histone acetyltransferase complex in radiation-induced DNA damage response	Tsuyoshi Ikura	Kyoto University	Satoshi Tashiro	Hiroshima University	Conti.
Mechanisms of DNA damage responses in hypoxic cancer cells	Hidetaka Eguchi	Juntendo University	Keiji Tanimoto	Hiroshima University	Conti.
Study on the mechanism of zygotic genome activation using early rat embryos.	Kohtaro Morita	Kyoto University	Kento Miura	Hiroshima University	New
Analysis of the molecular mechanism of the genomic instability in carcinogenesis	Tomoko Ishikawa-Fujiwara	Osaka University	Megumi Sasatani	Hiroshima University	Conti.
Analysis of cellular strategy of autophagy-dependent cancer cell growth	FURUYA Kanji	Kyoto University	Yasuko Honjo	Hiroshima University	Conti.
Analysis of the role of non-canonical translation initiation factors in radiation-induced DNA damage restration.	Kakuta Shigeru	The University of Tokyo	Osamu Kaminuma	Hiroshima University	Conti.

【Other important projects】

2.Research on mechanisms of radiation carcinogenesis and development of cancer treatment

Genomic and epigenomic analysis of hematological malignancies	Hirotsuka Matsui	Kumamoto University	Akiko Nagamachi	Hiroshima University	Conti.
Exploring new functions of ascorbic acid for effective cancer suppression and radiation protection	Habu, Toshiyuki	Mukogawa Women's University	Megumi Sasatani	Hiroshima University	Conti.

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Preliminary study for genome analysis using preserved blood specimens from atomic bomb survivors	Tomonori Hayashi	Radiation Effects Research Foundation	Shinya Matsuura	Hiroshima University	Conti.
The effect of low-dose irradiation on the functions of tumor-associated macrophages	Shotaro Nakajima	Fukushima Medical University	Osamu Kaminuma	Hiroshima University	Conti.
Histopathological analysis in the carcinogenic processes on radiation-induced intestinal tumor	Morioka Takamitsu	Nat'l Insti. for Quantaum Science and Technology	Megumi Sasatani	Hiroshima University	Conti.
Development of a screening method for anticancer drugs targeting the error-prone DNA repair pathway activated in cancer cells after Ionizing radiation	Kohzaki Masaoki	University of Occupational and Environmental Health, Japan	Keiji Suzuki	Nagasaki University	Conti.
Elucidation of molecular mechanism of ATM-activation by metformin	Tomoyuki Hamamoto	Showa Pharmaceutical University	Keiji Suzuki	Nagasaki University	Conti.
Carcinogenic mechanism of B-cell lymphoma/leukemia by radiation exposure	Hiroataka TACHIBANA	Chiba University	Megumi Sasatani	Hiroshima University	New
Elucidation of the mechanism of radiation-induced hepatocarcinogenesis	Morioka Takamitsu	Nat'l Insti. for Quantaum Science and Technology	Keiji Suzuki	Nagasaki University	Conti.
Development of the novel cancer therapy based on host immune surveillance	Yasuda Tomoharu	Hiroshima University	Toshiya Inaba	Hiroshima University	Conti.
Analysis of radiation-specific molecular abnormalities in skin cancer associated with medical radiation exposure	Hiroyuki Murota	Nagasaki university	Masahiro Nakashima	Nagasaki University	Conti.
p16INK4A expression in radioiodine-refractory radiogenic and sporadic thyroid cancer from Ukraine	Liudmyla Zurnadzhy	State Institution "VP Komisarenko Institute of Endocrinology and Metabolism of the NAMS of Ukraine" (IEM)	Vladimir Saenko	Nagasaki University	Conti.
Detection of mutational signatures in the cancer tissue of Nagasaki atomic bomb survivors	Yuko Akazawa	Nagasaki University Graduated School of Bionedical Sciences	Masahiro Nakashima	Nagasaki University	New
Does PET/CT predict histopathological diagnosis in early esophageal squamous cell carcinoma?	Yuko Akazawa	Nagasaki University Graduated School of Bionedical Sciences	Takashi Kudo	Nagasaki University	New
Analyses of hepatic stellate cells and macrophages associated with radiation liver carcinogenesis in mice	Masataka Taga	Radiation Effects Research Foundation	Keiji Suzuki	Nagasaki University	Conti.
Genomic mutation analysis of radiation-induced mouse hepatocellular carcinoma	Yi SHANG	National Institutes for Quantum Science and Technology	Keiji Suzuki	Nagasaki University	Conti.



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Cellular kinetics of hematopoietic stem cell with Sfp1 gene deletion in bone marrow and spleen of X-irradiated mice	Mitsuaki Ojima	Oita University of Nursing and Health Sciences	Keiji Suzuki	Nagasaki University	Conti.
Expression of p16INK4A as a predictor of survival in patients with poorly differentiated thyroid carcinoma	Mikhail Frydman	Minsk City Clinical Oncological Center	Vladimir Saenko	Nagasaki University	New
Analysis of the malignant transformation mechanism of highly metastatic cells derived from a metastasis model of small cell lung cancer	SHUICHI SAKAMOTO	Microbial Chemistry Research Foundation	Megumi Sasatani	Hiroshima University	Conti.
Etiology-specific roles of four genetic loci conferring risk for radiation-related and sporadic thyroid cancer in pediatric and adult patients from Belarus	Tatsiana Leonava	Minsk City Clinical Oncological Center	Vladimir Saenko	Nagasaki University	Conti.
Development of 90Y-labeled internal radiation therapy agents - Molecular design for elucidation of radiation damages and decrease in radiation dose	FUCHIGAMI Takeshi	Kanazawa University	Kodai Nishi	Nagasaki University	Conti.
Analysis of myelodysplastic syndromes/myeloproliferative disorders in atomic bomb survivors	Daisuke Imanishi	Nagasaki Goto Chuoh Hospital	Yasushi Miyazaki	Nagasaki University	Conti.
Mechanisms of radiation carcinogenic susceptibility, explored from changes in the tissue microenvironment	Masaaki Sunaoshi	National Institutes for Quantum Science and Technology	Keiji Suzuki	Nagasaki University	Conti.
Study of radiation-induced senescence in helper T cells (2)	Wang Duo	University of Occupational and Environmental Health, Japan	Keiji Suzuki	Nagasaki University	Conti.
Role of miR-214/Per1 in mediating circadian variation of radiation sensitivity between normal and cancer cells	Ning-Ang Liu	Suzhou Medical College of Soochow University	Jiyang Sun	Hiroshima University	Conti.
Molecular mechanisms of radio-resistance in thyroid cancers	TANAKA Aya	Nagasaki University	Norisato Mitsutake	Nagasaki University	Conti.
Long-term control of glioma stem cell population recurrence by radiation and a novel chemotherapeutic paradigm	SUGIMORI, MICHIIYA	University of Toyama	Norisato Mitsutake	Nagasaki University	Conti.
Establishment of novel antitumoral strategy targeting tumor-associated microvessels	Masahiko KANEHIRA	University of Yamanashi Center for Life Science Research	Osamu Kaminuma	Hiroshima University	New
Development of NFAT isoform selective control method as a novel cancer treatment strategy	Noriko Kitamura	Tokyo Metropolitan Institute of Medical Science	Osamu Kaminuma	Hiroshima University	Conti.

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Mechanisms of cancer immune surveillance in Radiation Carcinogenesis	Yun Guo	Hiroshima University	Megumi Sasatani	Hiroshima University	New
Development of estimation protocol for radiosensitivity of individual using iPS cells and Raman spectroscopy	Horie Masanobu	Kyoto University	Hideaki Fujita	Hiroshima University	Conti.
Study on the effect of irradiation on the structure and functions of laminin molecule in basement membrane	KOSHIKAWA NAOHIKO	Tokyo Institute of Technology	Osamu Kaminuma	Hiroshima University	New
Gene mutation analysis study in basal cell carcinoma	Kazumitsu Sugiura	Fujita Health University	Osamu Kaminuma	Hiroshima University	New

【Other important projects】

3. Basic research on development of medical care for radiation disasters

Analysis of stress responsive substances induced by cerebral ischemia	Sakai Norio	Hiroshima University	Satoshi Tashiro	Hiroshima University	Conti.
Development of analysis techniques using three-dimensional electron microscopy for evaluation of radiation damage	Takeshi Itabashi	Yamaguchi University	Satoshi Tashiro	Hiroshima University	New
Mouse model study of clonal hematopoiesis and cardiovascular disease	Yoichiro Kusunoki	Radiation Effects Research Foundation	Megumi Sasatani	Hiroshima University	Conti.
Analysis of the pathophysiology for periodontal disease, a risk factor for radiation-induced jaw osteonecrosis.	Tanaka Yoshihiko	Fukuoka Dental College	Osamu Kaminuma	Hiroshima University	Conti.
Analyses of mechanisms underlying lung fibrosis, and search for target molecules for drug development	Takeshi Nabe	Faculty of Pharmaceutical Sciences, Setsunan University	Osamu Kaminuma	Hiroshima University	Conti.
Comprehensive searches for novel biomarkers associated with radiation-induced liver injury in mice	Masataka Taga	Radiation Effects Research Foundation	Megumi Sasatani	Hiroshima University	Conti.
Dose estimation for cattle affected by the nuclear accident using nondestructive electron spin resonance	YAMAGUCHI Ichicho	National Institute of Public Health	Hiroshi Yasuda	Hiroshima University	New

【Other important projects】

4. Basic research on regenerative medicine approaches to improve radiation treatment

Regenerative medicine in cardiovascular diseases	Kajikawa Masato	Hiroshima University	Yukihito Higashi	Hiroshima University	Conti.
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Research on the function and mechanism of cardiomyocyte physiology	Takahashi Masafumi	Jichi Medical University	Yukihito Higashi	Hiroshima University	Conti.
Reprogramming of human bone marrow-derived mesenchymal stem cells and treatment of radiation damage to normal tissues	Yoshio Hosoi	Tohoku University	Shinya Matsuura	Hiroshima University	Conti.
Analysis of the function of hematopoiesis	Goto Chikara	Hiroshima International Uni.	Yukihito Higashi	Hiroshima University	Conti.
Analysis of inflammatory responses induced by necrotic cells	Kisaburo NAGATA	University of Toho	Osamu Kaminuma	Hiroshima University	Conti.
Elucidating the role of T cell repertoire variation in disease pathogenesis	Kimiko Inoue	Bioresource Research Center, RIKEN	Osamu Kaminuma	Hiroshima University	Conti.
Research on analysis of vascular endothelial cell function	Akira Taguchi	Matsumoto Dental University	Yukihito Higashi	Hiroshima University	Conti.
Effects of Radiation Exposure on Kidney	Akira Nishiyama	Kagawa University	Yukihito Higashi	Hiroshima University	Conti.
Musculoskeletal Regenerative Therapy with MSC-derived Exosomes	NOBUO ADACHI	Hiroshima University	Yukihito Higashi	Hiroshima University	Conti.
Investigation of the effects of mesenchymal stem cells on radiation-induced cardiovascular lesions	Takahiro Harada	Hiroshima University	Yukihito Higashi	Hiroshima University	New

【Other important projects】

5.Evaluative research on health effects and health risks associated with radiation disasters

The effect of radiation on transportation of regenerative medicine	Aoyama Tomoki	Kyoto University	Hiroshi Yasuda	Hiroshima University	Conti.
Association of radiation exposure with atherosclerosis and cardiovascular disease among atomic bomb survivors	Sasaki Nobuo	Hiroshima Atomic Bomb Casualty Council	Yukihito Higashi	Hiroshima University	Conti.
Source strength and indoor position-based distribution of radon and thoron: an experiment in a model room and real houses using active and passive monitors	Changting Guh	The University of Tokyo	Tetsuo ISHIKAWA	Fukushima Medical University	New
Long-term health effect study of young people who evacuate after the Great East Japan Earthquake	Kana Yamamoto	Medical Governance Research Institute	Masaharu Tsubokura	Fukushima Medical University	Conti.

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The effects of post-disaster lifestyle changes on the results of health checkups among children and adolescents	Yamagishi Kazumasa	University of Tsukuba	Tetsuya Ohira	Fukushima Medical University	Conti.
Role of short-chain fatty acids in intestinal immune system	Chiharu Nishiyama	Tokyo University of Science	Osamu Kaminuma	Hiroshima University	New
The effects of radiation exposure and background factors on the development of renal disease	Konta Tsuneo	Yamagata University	Seiji Yasumura	Fukushima Medical University	Conti.
Flow rate dependence of collection filters for alpha particles dust monitor	Kiso Mizuki	Hirosaki University	Tetsuo Ishikawa	Fukushima Medical University	New
Clonal hematopoiesis-related somatic mutation analyses in Hiroshima atomic-bomb survivors	Kengo Yoshida	Radiation Effects Research Foundation	Yasushi Miyazaki	Nagasaki University	New
An interview survey to search for the causes of decreased access to cancer care after the 2011 Fukushima triple disaster	Akihiko Ozaki	Jyoban Hospital of Tokiwa Foundation	Masaharu Tsubokura	Fukushima Medical University	Conti.
Study on Influence Factors on Radon Exhalation rate from soil - the improvement of accumulation chamber technique	Qianhao JIN	The University of Tokyo	Yasuda Hiroshi	Hiroshima University	New
Long-term trend of the subjective health: the Fukushima health management survey	Masato Nagai	Osaka Medical and Pharmaceutical University	Tetsuya Ohira	Fukushima Medical University	Conti.
Relationship between dietary patterns after radiation disasters and future mental distress: Fukushima Prefectural Health Survey	Yoshida Junko	Fukuyama University	Tetsuya Ohira	Fukushima Medical University	Conti.
Association between Laughter and Lifestyle Diseases after the Great East Japan Earthquake	Eri Eguchi	Fukushima Medical University	Tetsuya Ohira	Fukushima Medical University	Conti.
Association between sleep state and mental health state among elementary school children	Tanigawa Takeshi	Juntendo University Graduate School of Medicine	Tetsuya Ohira	Fukushima Medical University	Conti.
Relationship between changes in living and economic environment before and after the Great East Japan Earthquake and cardiovascular disease: the Fukushima Health Management Survey	Ai Noda	Juntendo University Graduate School of Medicine	Tetsuya Ohira	Fukushima Medical University	Conti.
The impact of a disaster on smoking behavior after the Great East Japan Earthquake	Risa Murakami	Kobe University Graduate School of Health Sciences	Tetsuya Ohira	Fukushima Medical University	Conti.
Basic research on the history of research on the health effects of radiation disasters using ABCC/RERF-related materials	Kaori Iida	Graduate Univ. for Advanced Studies, SOKENDAI	Akiko Kubota	Hiroshima University	Conti.

FY2023 Adopted Joint Usage/Research Projects (As of April 24, 2023)

Joint Research Title	Joint Researcher (Representative)	Affiliated Organization	Resident Researcher (Representative)	Affiliated Organization	New. · Conti.
Research on the indicators of health impact caused by	Ochi, Sae	The Jikei University School of Medicine	Seiji Yasumura	Fukushima Medical University	Conti.
Association between lifestyle changes and the prevalence of abdominal obesity for four years after the Great East Japan Earthquake: The Fukushima Health Management Survey	Mayu Uemura	Nagoya University	Tetsuya Ohira	Fukushima Medical University	Conti.
The incidence of diabetes on the association with psychological distress in the cohort of evacuee after the Great East Japan Earthquake in Fukushima, Japan: A 10-year follow-up of the Fukushima Health Management Survey	Ryo Kawasaki	Osaka University	Seiji Yasumura	Fukushima Medical University	Conti.
Cross-cultural study of information needs and organizational approaches on diabetes issues of population in Gomel and Fukushima	Anastasiya Sachkouskaya	Gomel State Medical University	Aya Goto	Fukushima Medical University	Conti.
Association of PTSD symptoms, mental distress, and CVD among residents in the evacuation area of Fukushima after the Great East Japan Earthquake	Kazuhide Tezuka	Sakamoto Mental Health Center	Tetsuya Ohira	Fukushima Medical University	Conti.
Analysis of Social Signification Process of Medical-Scientific Statements: Using Newspaper Articles as Examination Materials	NOMIYA, Daishiro	Chuo University	Akiko Kubota	Hiroshima University	New
Spatiotemporal variation of natural radon isotopes in assessing indoor human exposures and effective countermeasures using room based experiments	HASAN MD MAHAMUDUL	The University of Tokyo	Tetsuo ISHIKAWA	Fukushima Medical University	Conti.
Differences in Mortality Trends among the elderly by whether they evacuated after the Great East Japan Earthquake	Tomotaka Sobue	Osaka University	Seiji Yasumura	Fukushima Medical University	New

【Other important projects】

6.Application of radioisotopes to medical diagnosis and treatment

Development of probes for radiotheranostics containing alpha emitter radionuclides	Ogawa Kazuma	Kanazawa University	Kazuhiro Takahashi	Fukushima Medical University	Conti.
Validation of dosimetry analysis using scintigraphy and correlation with renal toxicity of Lu-177-DOTATATE therapy in neuroendocrine neoplasm	Noriaki Miyaji	Cancer Institute Hospital of Japanese Foundation for Cancer Research	Noboru Oriuchi	Fukushima Medical University	Conti.
Development of a targeted theranostics platform using <sup>211</sup> At	Nakamura Hiroyuki	Tokyo Institute of Technology	Kohshin Washiyama	Fukushima Medical University	Conti.
Establish of analysis method in the original phantom for tau PET imaging	Kei Wagatsuma	Kitasato University	Kenta Miwa	Fukushima Medical University	Conti.

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Joint Research Title	Joint Researcher (Representative)	Affiliated Organization	Resident Researcher (Representative)	Affiliated Organization	New. · Conti.
Development of novel radiotheranostics methods targeting tumor hypoxia	Yoichi Shimizu	Kyoto University	ZHAO Songji	Fukushima Medical University	Conti.
Development of <sup>211</sup> At radiolabeling reaction via aryl boronic acid or ester precursor and its application to radio-theranostics probes.	KIMURA HIROYUKI	Kyoto Pharmaceutical University	Kazuhiro Takahashi	Fukushima Medical University	Conti.
Development of a new therapeutic strategy for aspergillosis using radioisotopes	Masato Tashiro	Nagasaki University Graduate School of Biomedical Sciences	Kodai Nishi	Nagasaki University	Conti.
Role of KATP channel molecules in radiation-induced neurological, urinary and reproductive system disorders	Ming Zhou	Akita University Graduate School of Medicine	Tao-Sheng Li	Nagasaki University	Conti.
Research on fundamental science and radiochemical characteristics of astatine	Ichiro Nishinaka	National Institutes for Quantum Science and Technology	Kohshin Washiyama	Fukushima Medical University	Conti.
Study of astatine-211 chemical separation method useful for internal isotope therapy	Yokoyama, Akihiko	Kanazawa University	Kohshin Washiyama	Fukushima Medical University	Conti.
Development of nuclear medicine imaging for drug-resistant bacterial infection	Masato Kobayashi	Kanazawa University	Kodai Nishi	Nagasaki University	Conti.
Study on PET image quality improvement by PET scanner	Yasuyuki Takahashi	Hirosaki University	Noboru Oriuchi	Fukushima Medical University	Conti.
Study on the molecular mechanism of targeted alpha therapy: intercellular communication through extracellular nucleotide	Yasuhiro Ohshima	National Institutes for Quantum Science and Technology	Naoyuki Ukon	Fukushima Medical University	New

**【Other important projects】**

## 7. Medical radiation research

Development of radiation combination therapy drugs to increase cancer control rates through p53 regulation	Akinori Morita	Tokushima University	Toshiya Inaba	Hiroshima University	New
Research on the mechanism of radiation-induced taste disorders	Masaru Konishi	Hiroshima University Hospital	Shinya Matsuura	Hiroshima University	Conti.
Dose Distribution Assessment and Radiation Protection in Veterinary Hospitals	WANG Xueqing	The University of Tokyo	Hiroshi Yasuda	Hiroshima University	New
Development of novel radiosensitizing therapy for malignant brain tumors using photosensitizer precursor; 5-aminolevulinic acid	Kazuhiko Mishima	Saitama Medical University International Medical Center	Osamu Kaminuma	Hiroshima University	Conti.

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Joint Research Title	Joint Researcher (Representative)	Affiliated Organization	Resident Researcher (Representative)	Affiliated Organization	New. · Conti.
Protective effect of p53 regulators against intestinal damage after multiple-dose irradiation	Yuichi Nishiyama	Tokushima University	Megumi Sasatani	Hiroshima University	Conti.
Novel therapeutic approaches targeting L-type amino acid transporters for radiation - induced cancer treatment	Keitaro Hayashi	Dokkyo Medical University	Osamu Kaminuma	Hiroshima University	Conti.
Assessment of DNA damage repair responses after heavy-ion radiation exposure	Asako J. Nakamura	Ibaraki University	Keiji Suzuki	Nagasaki University	Conti.
Evaluation of clinico-pathological and molecular status of patients with radioactive iodine-refractory papillary thyroid cancer in Kazakhstan.	Laura Pak	Semey State Medical University	Masahiro Nakashima	Nagasaki University	New
Assessment of exposure dose of X-ray of finger related to special needs dentistry.	Minoru Miyake	Kagawa University	Hiroshi Yasuda	Hiroshima University	New
Effects of phytoestrogens on radiation response in hypoxic cancer cells	Takako Sakamoto	Jichi Medical University	Keiji Tanimoto	Hiroshima University	Conti.
Evaluation of clinico-pathological and molecular status of patients with radioactive iodine-refractory papillary thyroid cancer in Kazakhstan.	Laura Pak	Semey State Medical University	Masahiro Nakashima	Nagasaki University	New

## 【Open-topic projects】

Effect of antibiotic and hormonal therapy on intrauterine microbial colonization in endometriosis	Khaleque Khan	Kyoto Prefectural University of Medicine	Masahiro Nakashima	Nagasaki University	Conti.
Neural basis of adaptive behaviors coping stress	Hidenori Aizawa	Hiroshima University	Hideshi Kawakami	Hiroshima University	Conti.
Whole exome sequencing of Beckwith-Wiedemann syndrome patients without known causative (epi)genome alterations	Hidenobu Soejima	Saga University	Koh-ichiro Yoshiura	Nagasaki University	Conti.
Functional screening of metabolites produced by plant derived lactic acid bacteria	Sugiyama Masanori	Hiroshima University	Keiji Tanimoto	Hiroshima University	Conti.
Evaluation about a novel diagnostic kit-product and automatic immunochromatography-reader for detection of lymph node metastases in breast cancer applying the semi-dry dot-blot method.	Ryota Otsubo	Nagasaki University Hospital	Masahiro Nakashima	Nagasaki University	New
Search for novel therapeutic targets for knee osteoarthritis	Norimitsu Morioka	Hiroshima University	Keiji Tanimoto	Hiroshima University	Conti.

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Joint Research Title	Joint Researcher (Representative)	Affiliated Organization	Resident Researcher (Representative)	Affiliated Organization	New. · Conti.
Examination of the effect of microRNA-26a on pulmonary fibrosis	Hattori Noboru	Hiroshima University, Graduate School of Biomedical and Health Sciences	Yoshihiro Miyata	Hiroshima University	New
Exploration of molecules that activate tumor-associated macrophages in hepatocellular carcinoma.	Hiroyuki Tsuchiya	Tottori University	Yasuko Honjo	Hiroshima University	New
Profiling of Circulating T cells in Patients with Lymphedema	Hirofumi Imai	Hiroshima University Hospital	Tatsuo Ichinohe	Hiroshima University	Conti.
Research into the application of Tscm cells for the treatment of hepatitis.	Hiromi Abe-Chayama	Hiroshima University	Tatsuo Ichinohe	Hiroshima University	Conti.
Investigation of treatment effects of adipose-derived stromal cells for psoriasis	Ryohei Ogino	Hiroshima University	Keiji Tanimoto	Hiroshima University	Conti.
Elucidation of the mechanism of immune response regulation by exercise	Daisuke Shiiba	Kurashiki University of Science and the Arts	Keiji Tanimoto	Hiroshima University	Conti.
Analysis of the interaction between BMP/Smad and TNF $\alpha$ -induced inflammatory signals.	Hirata-Tsuchiya Shizu	Hiroshima University	Toshiya Inaba	Hiroshima University	Conti.
Functional analysis of primary cilia using knockout cells.	Koji Ikegami	Hiroshima University	Hideshi Kawakami	Hiroshima University	Conti.
Biological effects of chemicals on endogenous substances in vitro and in vivo (6)	Yaichiro Kotake	Hiroshima University	Nariaki Fujimoto	Hiroshima University	Conti.
Whole genome sequencing of amphibians having undergone remarkable adaptive evolution	Takeshi Igawa	Hiroshima University	Hideshi Kawakami	Hiroshima University	Conti.
Validation of the association between radiological morphology and proteasome expression in renal cell carcinoma.	Kohei Kobatake	Hiroshima University	Osamu Kaminuma	Hiroshima University	New
Identification of neural lineage fate determinants in the striatum of fetus mouse exposed in utero to radiation.	SHIRAIISHI Kazunori	Osaka metropolitan university	Megumi Sasatani	Hiroshima University	New
Kinetic analysis of LAT1 expression and mTOR activation in ovarian cancer	Masaki Sekine	Graduate School of Biomedical and Health Sciences	Hideshi Kawakami	Hiroshima University	Conti.
Neuroprotective effects of ROCK inhibitors on retinal ganglion cells	Edo Ayaka	Hiroshima Univ.	Satoshi Tashiro	Hiroshima University	Conti.
Effects of Low-dose Radiation Exposure on Vascular Function	Harutoyo Hirano	Fujita Health University	Yukihito Higashi	Hiroshima University	Conti.



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Joint Research Title	Joint Researcher (Representative)	Affiliated Organization	Resident Researcher (Representative)	Affiliated Organization	New. · Conti.
Functional analysis of optineurin in innate immunity	Masaya Fukushi	Hiroshima University	Hideshi Kawakami	Hiroshima University	Conti.
The analysis of adipose specific Ints6 conditional knockout mouse	Yuichiro Otani	Hiroshima University Hospital	Tatsuo Ichinohe	Hiroshima University	Conti.
The analysis of cancer genome and circulation tumor DNA for gastrointestinal cancer	Yuji Urabe	Hiroshima University Hospital	Akiko Nagamachi	Hiroshima University	Conti.
Prolyl isomerase are committed to the onset of both cancer and metabolic syndromes.	Asano Tomoichiro	Hiroshima University	Toshiya Inaba	Hiroshima University	Conti.
Elucidation of epigenetic regulation for brown fat development	Haruya Ohno	Hiroshima University	Akiko Nagamachi	Hiroshima University	Conti.
Elucidation of intramyocardial calcium dynamics in A kinase anchor protein mutants	Yukiko Nakako	Hiroshima University	Satoshi Tashiro	Hiroshima University	Conti.
Investigation of the pathophysiology for hereditary neurological diseases	Masahiro NAKAMORI	Hiroshima University	Kodai Kume	Hiroshima University	Conti.
Analysis of causative genes for neurodegenerative diseases	Yui Tada	Hiroshima University	Hideshi Kawakami	Hiroshima University	New
Analysis of the role of innate lymphoid cell in pulmonary arterial hypertension	Nakae Susumu	Hiroshima University	Tatsuo Ichinohe	Hiroshima University	Conti.
analysis of Staphylococcus aureus derived from atopic dermatitis and innate immunity	MASAYA MORIWAKI	Hiroshima University	Osamu Kaminuma	Hiroshima University	Conti.
Understanding the mechanism of cancer cachexia and the development of a comprehensive therapeutic exercise program	MIYAZAKI, Mitsunori	Hiroshima University	Keiji Tanimoto	Hiroshima University	Conti.
Pathophysiological role of CPP2 on CKD induced muscle wasting	Shohei Kohno	Hiroshima University	Keiji Tanimoto	Hiroshima University	New
Exploring the regulatory function of protein droplets formed through liquid-liquid phase separation (LLPS) in cells	Shin-ichi Tate	Hiroshima University	Satoshi Tashiro	Hiroshima University	Conti.
inducible gene expression system	Teruhisa Fujii	Hiroshima University	Satoshi Tashiro	Hiroshima University	Conti.
Analysis of transplantation and tumor antigen-specific immune response	OHDAN HIDEKI	Hiroshima University	Satoshi Tashiro	Hiroshima University	Conti.