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Development of Strategy on Near Surface Disposal of Radioactive Waste and Case Study on Analysis of Social Reflections of ALPS Treated Water Discharge from Fukushima Daiichi NPP.	Qianhao JIN	The University of Tokyo	Hiroshi Yasuda	Hiroshima University	New.
Examining the latest data on mice from a mathematical model that considers DNA damage and recovery	Yuichiro Manabe	Osaka 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.
The tenth-year decontamination after Fukushima accident	Satoru Nakashima	Hiroshima University	Yu Abe	Nagasaki University	Conti.
Establishment of a next generation sequencing method for high-throughput analysis of mutations induced by low-dose(-rate) irradiation	Hidehiko Kawai	Hiroshima University	Megumi Sasatani	Hiroshima University	Conti.
Study on suppression effect of cell death by low-dose radiation	Shinsuke Katoh	Yokohama University of Pharmacy	Yu Abe	Nagasaki 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	New.
Histopathological examination of juvenile thyroid cancer in the area around Chernobyl and in Japan	Masahiro Ito	Nagasaki Medical Center	Masahiro Nakashima	Nagasaki University	Conti.
Molecular pathogenesis of childhood and adolescent thyroid cancers	SUZUKI Shinichi	Fukushima Medical University	Norisato Mitsutake	Nagasaki 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.
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.
Effect of low-dose / low-dose-rate radiation exposure for Th1 / Th2 balance in vivo on mouse	Eiji TAKAYAMA	Asahi University	Tatsuo Ichinohe	Hiroshima University	Conti.
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.
Analysis of molecular response of hematopoietic stem cells to low dose rate radiation in the single cell level	Shin'ichiro Yasunaga	Fukuoka University	Shinya Matsuura	Hiroshima University	Conti.
Effect of low dose rate radiation for mitochondria in hematopoietic stem cells	Naoto Shirasu	Fukuoka University	Shinya Matsuura	Hiroshima University	Conti.
Selection of repair mechanism for genomic damage in hematopoietic system	Yoshinori Ohno	Fukuoka University	Shinya Matsuura	Hiroshima University	Conti.

## FY2022 Adopted Joint Usage/Research Projects (As of December 26, 2022)

Joint Research Title	Joint Researcher (Representative)	Affiliated Organization	Resident Researcher (Representative)	Affiliated Organization	New. · 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.
Analysis of the relation of cellular responses to low-dose radiation to the radioadaptive response	Akira Tachibana	Ibaraki University	Hiroshi Yasuda	Hiroshima University	Conti.
Effect of mesenchymal stem cells on radiation-induced tissue injury	Nakashima Ayumu	Hiroshima University	Yukihito Higashi	Hiroshima University	New.

## 【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 Prefecture 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

Comprehensive analysis of gene expression changes after irradiation with candidate compounds for radioprotective agents	Akinori Morita	Tokushima University	Toshiya Inaba	Hiroshima University	Conti.
Radioprotective effects of a cystine and theanine mixture in rats	Takashi Tsuchiya	Sendai Open Hospital	Masahiro Nakasima	Nagasaki 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.
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.
Phytocjemeal study on radioprotective natural compounds	Matsunami Katsuyoshi	Hiroshima University	Satoshi Tashiro	Hiroshima University	Conti.

## 【Project responding to Fukushima Nuclear Power Plant accident】

## 4.Research on risk communication regarding radiation disasters

Clarifying the potential function of thyroid cysts	Yuji Shimizu	Nagasaki University	Naomi Hayashida	Nagasaki University	Conti.
Anxiety survey for the implementation of risk communication for Fukushima nuclear power plant workers	Ryuji Okazaki	University of Occupational and Environmental Health, Japan	Seiji Yasumura	Fukushima Medical University	New.
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.

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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	New.
Analysis of the Impressions and Knowledge of Radiation in Countries in the Asia-Pacific Region	Miyazaki Tomoyuki	The University of Tokyo	Seiko Hirota	Hiroshima University	New.
Research on the incidence and death of diseases and their distribution of evacuees and returnees after the Great East Japan Earthquake	SUN ZHICHAO	Osaka University	Tetsuya Ohira	Fukushima Medical University	Conti.
A Multilevel Analysis of Community Connections Affecting Mental Health after the Earthquake	Maiko Nagasawa	Osaka University	Tetsuya Ohira	Fukushima Medical University	Conti.
Ethical Challenges in Health and Disaster Research	Sudeepa Abeysinghe	University of Edinburgh	Aya Goto	Fukushima Medical University	New.
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.
Exploration for storage and usage of administrative records after nuclear accident.	OKURA, Masahiro	The University of Tokyo	Akiko Kubota	Hiroshima University	New.
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.
Association between parity status and after great disaster psychological stress tolerance	Sumiyo Yasukawa	Okayama University	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.
A case study 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.
A research of the impact of mass media coverage on public perception on the radiation	Midori Aoyagi	National Institute for Environmental Studies	Seiji Yasumura	Fukushima Medical University	Conti.

## 【Other important projects】

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

Analysis of the role of histone H2AZ ubiquitination in genome maintenance	Kouji Hirota	Tokyo Metropolitan University	Satoshi Tashiro	Hiroshima University	Conti.
The analysis for the endoplasmic reticulum function altered by cellular stress.	Kazunori Imaizumi	Hiroshima University	Akiko Nagamachi	Hiroshima University	Conti.
Histone H3K4me3 is required for the DNA damage response	Nakata Yuichiro	University of Miami	Osamu Kaminuma	Hiroshima University	Conti.

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Joint Research Title	Joint Researcher (Representative)	Affiliated Organization	Resident Researcher (Representative)	Affiliated Organization	New. · Conti.
Role of NBS1 protein in cellular responses to ionizing radiation	Hiroshi Tauchi	Ibaraki University	Shinya Matsuura	Hiroshima University	Conti.
Effects of radiation on development and aging in zebrafish	Hiromi Hirata	Aoyama Gakuin University	Yasuko Honjo	Hiroshima University	Conti.
Elucidation of the mechanism underlying DSB repair machinery for the suppression of genetic mutation after ionizing radiation	Atsushi Shibata	Gunma University	Keiji Suzuki	Nagasaki University	Conti.
Analysis of ATM activation by delayed mitochondrial ROS	Genro Kashino	Nara Medical University	Keiji Suzuki	Nagasaki University	Conti.
Effective tumor suppression and protection from exposure to ionizing radiation by exploring new functions of ascorbic acid	Habu, Toshiyuki	Mukogawa Women's University	Megumi Sasatani	Hiroshima University	Conti.
Role of XRCC3 polymorphism in pathogenesis and progression of cardiac hypertrophy	Sakai Chiemi	Hiroshima University	Satoshi Tashiro	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	New.
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 cellular function of polyubiquitinated PCNA	Yuji Masuda	Nagoya University	Megumi Sasatani	Hiroshima University	Conti.
Mechanisms of DNA damage responses in hypoxic cancer cells	Hidetaka Eguchi	Juntendo University	Keiji Tanimoto	Hiroshima University	Conti.
Analysis of the mechanisms involved in radiosensitivity of malignant glioma cells	Hama Seiji	Hiroshima University	Shinya Matsuura	Hiroshima University	Conti.
Analysis of the role of non-canonical translation initiation factors in radiation-induced DNA damage retraction.	KAKUTA Shigeru	The University of Tokyo	Osamu Kaminuma	Hiroshima University	New.
Role of unrepaired DNA damages in the radiation induced mutagenesis	Noda Asao	Radiation Effects Research Foundation	Keiji Suzuki	Nagasaki University	Conti.
Identification of hypoxia-induced RNA modifications using a nanopore sequencer	Kiichi Hirota	Kansai Medical University	Keiji Tanimoto	Hiroshima University	Conti.
Investigation of protective effect of Nrf2 against radiation-induced infertility	Masahiko KANEHIRA	University of Yamanashi	Osamu Kaminuma	Hiroshima University	New.
Mechanism by which splicing factors promote repair of radiation-induced DNA double-strand breaks	Motohiro Yamauchi	Kyushu University	Keiji Suzuki	Nagasaki University	New.

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Joint Research Title	Joint Researcher (Representative)	Affiliated Organization	Resident Researcher (Representative)	Affiliated Organization	New. · 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	New.
Histone H3K36 methyltransferase functions in DNA repair	URA Kiyoe	Chiba 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.
Alcohol intake is associated with the risk of developing hyperglycemic disorders in young women	Vladimir Pereverzev	Belarusian State Medical University	Naomi Hayashida	Nagasaki University	Conti.
Comparative assessment of gastroduodenal gastric microbiota resistome variability in patients living in the Gomel region of the Republic of Belarus infected with Helicobacter pylori to develop effective methods of resistance gene detection (using next generation sequencing) in persons affected by the Chernobyl disaster and residents of Japan with diseases of the gastrointestinal tract.	Evgenii Voropaev	Gomel State Medical University	Naomi Hayashida	Nagasaki University	New.
Regulation of chromatin structures involved in repair of UV-induced DNA damage	Kaoru Sugawara	Kobe University	Satoshi Tashiro	Hiroshima University	Conti.
Roles of epigenomic modification on DNA damage response under hypoxic conditions	Eisaburo Sueoka	Saga University	Keiji Tanimoto	Hiroshima University	Conti.
Elucidation of the role of Rif1 in DSB repair	Iguchi Tomohiro	Tokyo Metropolitan Institute of Medical Science	Osamu Kaminuma	Hiroshima University	Conti.
A study of induction-mechanisms of DNA double-strand breaks	Isao Kuraoka	Fukuoka University	Satoshi Tashiro	Hiroshima University	New.
Transcriptome analyses of radiation responses in hypoxia by using public database	Hiromasa Ono	Research Organization of Information and Systems	Keiji Tanimoto	Hiroshima University	Conti.
Hypoxia signal and DNA damage response in aging	Bhawal Ujjal	Nihon University	Keiji Tanimoto	Hiroshima University	Conti.
Novel responsible genes of diseases with genomic instability around the Chernobyl area	Ogi Tomoo	Tokai National Higher Education and Research System	Norisato Mitsutake	Nagasaki University	Conti.
Analysis of the molecular mechanism of the genomic instability in carcinogenesis	Tomoko Ishikawa-Fujiwara	Osaka University	Megumi Sasatani	Hiroshima University	New.
Analysis of DNA damage-dependent proteasome regulation by deubiquitinases	Maiko OKADA	Tokyo University of Technology	Keiji Suzuki	Nagasaki University	Conti.
Roles of the hypoxia-inducible factor- $\alpha$ in radiation sensitivity	Yuichi Makino	Asahikawa Medical University	Keiji Tanimoto	Hiroshima University	Conti.

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The cancer risk of ulcerative colitis investigated by 53BP1 fluorescent staining.	Hashiguchi Keiichi	Nagasaki University	Yuko Akazawa	Nagasaki University	Conti.
53BP1 fluorescent staining expression as DNA damage response in the patients of superficial laryngopharyngeal squamous cell carcinoma	Maiko Tabuchi	Nagasaki University	Yuko Akazawa	Nagasaki University	Conti.
Investigation of DNA damage response for lipotoxic hepatocyte	Nakao Yasuhiko	Nagasaki University	Yuko Akazawa	Nagasaki University	New.
The Roles of Matrin3 in DNA Repair	Lin Shi	Affiliated Hospital of Xuzhou Medical University	Satoshi Tashiro	Hiroshima University	Conti.
DNA damage response molecule expression analysis as a factor predicting the prognosis of oropharyngeal cancer	Hideaki Nishi	Nagasaki university	Katsuya Matsuda	Nagasaki University	Conti.
Analysis of radiation-specific molecular abnormalities in skin cancer associated with medical radiation exposure	Hiroyuki Murota	Nagasaki university	Masahiro Nakasima	Nagasaki University	Conti.
Analysis of accelerated senescence and DNA damage accumulation in DNA ligase4 deficient mouse	SHIRAISHI Kazunori	Osaka prefecture university	Megumi Sasatani	Hiroshima University	Conti.
Molecular pathologic characteristics of benign thyroid nodules showing nodule in nodule morphology	Mayu Ueda	Nagasaki University	Katsuya Matsuda	Nagasaki University	New.
The role of TIP60 histone acetyltransferase complex in radiation-induced DNA damage response	Tsuyoshi Ikura	Kyoto University	Satoshi Tashiro	Hiroshima University	Conti.
Analysis of the mechanisms of the formation of nuclear F-actin by DNA damage and THz irradiation	HARATA Masahiko	Tohoku University	Satoshi Tashiro	Hiroshima University	New.
How autophagy contributes to proliferation of cancer cells under genotoxic stress?	FURUYA Kanji	Kyoto University	Yasuko Honjo	Hiroshima University	New.

## 【Other important projects】

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

The effect of low-dose irradiation on the functions of tumor-associated macrophages	Nakajima Shotaro	Fukushima Medical University	Osamu Kaminuma	Hiroshima University	Conti.
Genomic and epigenomic analysis of hematological malignancies	Hirohata Matsui	Kumamoto University	Akiko Nagamachi	Hiroshima University	Conti.
Histopathological analysis in the carcinogenic processes on radiation-induced intestinal tumor.	Morioka Takamitsu	Nat'l Insti. for Quantum Science and Technology	Megumi Sasatani	Hiroshima University	Conti.
Elucidation of the mechanism of radiation-induced hepatocarcinogenesis.	Morioka Takamitsu	Nat'l Insti. for Quantum Science and Technology	Keiji Suzuki	Nagasaki University	Conti.

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Comprehensive analysis of immune-associated gene expression stimulated by ionizing radiation	Yuki Uchihara	Gunma University	Keiji Suzuki	Nagasaki 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.
Etiology-specific roles of four genetic loci conferring risk for radiation-related and sporadic thyroid cancer in adult patients from Belarus	Tatsiana Leonava	Minsk City Clinical Oncological Center	Vladimir Saenko	Nagasaki University	Conti.
Expression of PD-L1 and PD-1 in poorly differentiated thyroid carcinoma as a means of selecting patients for immunotherapy	Mikhail Frydman	Minsk City Clinical Oncological Center	Vladimir Saenko	Nagasaki University	Conti.
Development of the novel cancer therapy based on host immune surveillance	Yasuda Tomoharu	Hiroshima University	Toshiya Inaba	Hiroshima 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.
Elucidation of mechanism of anti-PD-1 antibody resistance in renal cell carcinoma based on the analysis of BACH1 function	Kohei Kobatake	Hiroshima University	Osamu Kaminuma	Hiroshima University	Conti.
Study of radiation-induced senescence in helper T cells	Wang Duo	University of Occupational and Environmental Health, Japan	Keiji Suzuki	Nagasaki 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	New.
Study on the effect of irradiation on the structure and functions of extracellular matrix protein	Koshikawa Naohiko	Tokyo Institute of Technology	Osamu Kaminuma	Hiroshima University	Conti.
Role of miR-214/Per1 in mediating circadian variation of radiation sensitivity between normal and cancer cells	Ning-Ang Liu	School of Radiation Medicine and Protection (SRMP), Soochow University, China	Jiyong Sun	Hiroshima University	Conti.
Epigenome analysis of low-dose and low-dose-rate radiation carcinogenesis	Kazuhiro Daino	National Institutes for Quantum Science and Technology	Megumi Sasatani	Hiroshima University	Conti.
Preliminary study for genome analysis using preserved blood specimens from atomic bomb survivors	Tomonori Hayashi	Radiation Effects Research Foundation	Shinya Matsuura	Hiroshima University	Conti.
PD-L1 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.

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Analysis of the malignant mechanism of highly metastatic cells derived from SCLC	Shuichi SAKAMOTO	Microbial Chemistry Research Foundation	Megumi Sasatani	Hiroshima University	Conti.
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.
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.
Development of MSC-secreted nanovesicle-based therapy	MIURA Yasuo	Fujita Health University	Tatsuo Ichinohe	Hiroshima University	New.
Molecular mechanisms of radio-resistance in thyroid cancers	TANAKA Aya	Nagasaki University	Norisato Mitsutake	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.
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.
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	New.
Evaluation of abscopal effect of liver metastasis after immunoradiotherapy using mouse colon cancer metastasis model	Yasuhiko Kitadai	Prefectural University of Hiroshima	Osamu Kaminuma	Hiroshima University	New.
Analysis of myelodysplastic syndromes/myeloproliferative disorders in atomic bomb survivors	Daisuke Imanishi	Nagasaki Goto Chuoh Hospital	Yasushi Miyazaki	Nagasaki University	Conti.
Transcription elongation regulation of inflammation	Jun Ninomiya-Tsuji	North Carolina State University	Maiko Ingakaki	Hiroshima University	Conti.
Development of estimation protocol for radiosensitivity of individual using iPS cells and Raman spectroscopy	Horie Masanobu	Kyoto University	Hideaki Fujita	Hiroshima University	New.
Analysis of the the suppression of oxidative stress by Sirtuins	Akira Tachibana	Ibaraki University	Kenji Kamiya	Hiroshima University	Conti.
Elucidation of disrupting effect on epigenetics induced by ionizing irradiation	Akinari YOKOYA	Ibaraki University	Keiji Suzuki	Nagasaki University	Conti.
The elucidation of a carcinogenic mechanism and determinants of malignancy for human cancers	Eiso Hiyama	Hiroshima University	Keiji Tanimoto	Hiroshima University	Conti.



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## 【Other important projects】

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

Development of a new radiation hazard analysis method using advanced electron microscopes	Atsuko Iwane	Institute of Physical and Chemical Research (RIKEN)	Satoshi Tashiro	Hiroshima University	Conti.
Elucidating the role of T cell repertoire variation in disease pathogenesis	Kimiko Inoue	RIKEN	Osamu Kaminuma	Hiroshima University	Conti.
Analyses of mechanisms underlying lung fibrosis, and search for target molecules for drug development	Takeshi Nabe	Setsunan University	Osamu Kaminuma	Hiroshima University	New.
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.
Mouse model study of clonal hematopoiesis and cardiovascular disease	Yoichiro Kusunoki	Radiation Effects Research Foundation	Megumi Sasatani	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.
Development of measuring device of radiation dose using human teeth	Miyake Minoru	Kagawa University	Hiroshi Yasuda	Hiroshima University	Conti.
Occupational radiation dose assessment for medical personnel using Electron Spin Resonance	Yamaguchi Ichiro	National Institute of Public Health	Hiroshi Yasuda	Hiroshima University	Conti.

## 【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.
Study of functional analysis of vascular endothelial cell	Akira Taguchi	Matsumoto Dental University	Yukihito Higashi	Hiroshima University	Conti.
Analysis of inflammatory responses induced by necrotic cells	Kisaburo NAGATA	University of Toho	Osamu Kaminuma	Hiroshima University	New.
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	New.
Research on the function and mechanism of cardiomyocyte physiology	Masafumi Takahashi	Jichi Medical University	Yukihito Higashi	Hiroshima University	Conti.
Regeneration of musculoskeletal tissues using MSC-derived exosome	Nobuo Adachi	Hiroshima University	Yukihito Higashi	Hiroshima University	Conti.

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Analysis of the function of cardiac muscle cells	Goto Chikara	Hiroshima International Uni.	Yukihito Higashi	Hiroshima University	Conti.
Effects of Radiation Exposure on Kidney	Akira Nishiyama	Kagawa University	Yukihito Higashi	Hiroshima University	New.

## 【Other important projects】

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

Analysis of stress responsive substances induced by cerebral ischemia	Sakai Norio	Hiroshima University	Satoshi Tashiro	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	New.
Establishment of individual radiosensitivity assessment	Ryuji Okazaki	University of Occupational and Environmental Health, Japan	Keiji Suzuki	Nagasaki University	New.
Long-term health effect study of young people who evacuated after the Great East Japan Earthquake	Kana Yamamoto	Medical Governance Research Institute	Masaharu Tsubokura	Fukushima Medical University	New.
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.
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.
Association between Laughter and Lifestyle Diseases after the Great East Japan Earthquake	Eri Eguchi	Fukushima Medical University	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	Tetsuya Ohira	Fukushima Medical University	Conti.
Study on the health effects of radioactively contaminated feed on livestock	Masayoshi KUWAHARA	The University of Tokyo	Osamu Kaminuma	Hiroshima 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.
Noise reduction of 3D Gel imaging by using DL	Shin-ichiro Hayashi	Hiroshima International University	Seiko Hirota	Hiroshima University	Conti.
Prevalence of behavioral risk factors for COVID-19 infection in the territories affected by the Chernobyl disaster	Tamara Sharshakova	Gomel State Medical University	Naomi Hayashida	Nagasaki University	New.
Assessment of an anxiety level of the population in the territories affected by the Chernobyl disaster in the conditions of the COVID-19 spreading	Tamara Sharshakova	Gomel State Medical University	Naomi Hayashida	Nagasaki University	New.

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The impact of a disaster on smoking behavior: a longitudinal study after the Great East Japan Earthquake	Risa Murakami	Kobe University	Tetsuya Ohira	Fukushima Medical 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	New.
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.
Effect of neutrophils on cytokinesis block micronucleus assay	TAKEBAYASHI Kai	Hirosaki University	Keiji Suzuki	Nagasaki University	Conti.
The effect of radiation on transportation of regenerative medicine	Tomoki Aoyama	Kyoto University	Hiroshi Yasuda	Hiroshima University	Conti.
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.
Historical studies of research into health effects caused by radiation disasters, based on ABCC/RERF-related archives	Kaori Iida	Graduate Univ. for Advanced Studies, SOKENDAI	Akiko Kubota	Hiroshima University	Conti.
Study on a relationship between snow accumulation and changes in ambient gamma dose rate from natural terrestrial radiation	OMORI Yasutaka	Hirosaki University	Tetsuo Ishikawa	Fukushima Medical 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.
Research on the indicators of health impact caused by nuclear disaster	Sae Ochi	The Jikei University School of Medicine	Seiji Yasumura	Fukushima Medical University	Conti.
Long-term trend of the subjective health: the Fukushima health management survey	Masato Nagai	Tokyo Medical and Dental University	Tetsuya Ohira	Fukushima Medical University	New.
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	Kawasaki Ryo	Osaka University	Seiji Yasumura	Fukushima Medical University	Conti.
A study of the effects of the Great East Japan Earthquake on the physical and cognitive abilities of the elderly	Tomotaka Sobue	Osaka University	Seiji Yasumura	Fukushima Medical University	New.
Association of PTSD symptoms, mental distress, and history of CVD among residents in the evacuation area of Fukushima after the Great East Japan Earthquake	Kazuhide Tezuka	Osaka Center for Cancer and Cardiovascular Disease Prevention	Tetsuya Ohira	Fukushima Medical University	Conti.
Noise reduction of ESR signal from biomaterials	Shin Toyoda	Okayama University of Science	Seiko Hirota	Hiroshima University	Conti.

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Joint Research Title	Joint Researcher (Representative)	Affiliated Organization	Resident Researcher (Representative)	Affiliated Organization	New. · Conti.
<b>【Other important projects】</b>					
6.Application of radioisotopes to medical diagnosis and treatment					
Role of KATP channel molecules in radiation-induced neurological, urinary and reproductive system disorders	Zhou Ming	Akita University	Tao-Sheng Li	Nagasaki University	Conti.
Development of a new therapeutic strategy for aspergillosis using radioisotopes	Masato Tashiro	Nagasaki University	Kodai Nishi	Nagasaki University	Conti.
Development of novel radiotheranostics methods targeting tumor hypoxia	Yoichi Shimizu	Kyoto University	ZHAO Songji	Fukushima Medical University	Conti.
Study on PET image quality improvement by PET scanner	Yasuyuki Takahashi	Hirosaki University	Noboru Oriuchi	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.
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	New.
Research on fundamental science and radiochemical characteristics of astatine	Ichiro Nishinaka	National Institutes for Quantum Science and Technology	Kohshin Washiyama	Fukushima Medical University	Conti.
Development of visualization and analytical method for At-211	Mariko Segawa	Japan Atomic Energy Agency	Kohshin Washiyama	Fukushima Medical University	Conti.
Association between sleep state and mental health state among elementary school children	Tanigawa Takeshi	Juntendo University	Tetsuya Ohira	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 JFCR	Noboru Oriuchi	Fukushima Medical University	New.
Establish of analysis method in the original phantom for tau PET imaging	Kei Wagatsuma	Kitasato University	Kenta Miwa	Fukushima Medical University	New.
Development of probes for radiotheranostics containing alpha emitter radionuclides	Ogawa Kazuma	Kanazawa University	Kazuhiro Takahashi	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	New.

Joint Research Title	Joint Researcher (Representative)	Affiliated Organization	Resident Researcher (Representative)	Affiliated Organization	New. · Conti.
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## 【Other important projects】

## 7. Medical radiation research

Development of novel radiosensitizing therapy for malignant brain tumors using photosensitizer precursor; 5-aminolevulinic acid	Mishima Kazuhiko	Saitama Medical University	Osamu Kaminuma	Hiroshima University	Conti.
Assessment of DNA damage repair responses after heavy-ion radiation exposure	Asako Nakamura	Ibaraki University	Keiji Suzuki	Nagasaki University	Conti.
Effects of phytoestrogens on radiation response in hypoxic cancer cells	Takako Sakamoto	Jichi Medical University	Keiji Tanimoto	Hiroshima University	Conti.
Protective effect of p53 regulators against intestinal damage after multiple-dose irradiation	Yuichi Nishiyama	Tokushima University	Megumi Sasatani	Hiroshima University	Conti.
Research on the mechanism of radiation-induced taste disorders	Masaru Konishi	Hiroshima University	Shinya Matsuura	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.

## 【Open-topic projects】

Functional screening of metabolites produced by plant derived lactic acid bacteria	Sugiyama Masanori	Hiroshima University	Keiji Tanimoto	Hiroshima University	Conti.
Effect of antibiotic and hormonal therapy on intrauterine microbial colonization in endometriosis	Khaleque Khan	Kyoto Prefectural University of Medicine	Masahiro Nakashima	Nagasaki University	Conti.
Examination of the effect of oral microflora alteration on pulmonary fibrosis	Hattori Noboru	Hiroshima University	Yoshihiro Miyata	Hiroshima University	New.
Whole exome sequencing of Beckwith-Wiedemann syndrome patients without known causative (epi)genome alterations	Soejima Hidenobu	Saga University	Koh-ichiro Yoshiura	Nagasaki University	New.
Investigation of curative treatment methods for psoriasis using adipose-derived stem cell	Ryohei Ogino	Hiroshima University	Keiji Tanimoto	Hiroshima University	Conti.
Development of monoclonal antibodies for therapy, diagnosis and prevention	Kiyomi Shitaoka	Hiroshima University	Osamu Kaminuma	Hiroshima University	New.
Functional analysis of optineurin in innate immunity	Masaya Fukushi	Hiroshima University	Hideshi Kawakami	Hiroshima University	Conti.
Whole genome sequencing of amphibians having undergone remarkable adaptive evolution	Takeshi Igawa	Hiroshima University	Hideshi Kawakami	Hiroshima University	Conti.

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Joint Research Title	Joint Researcher (Representative)	Affiliated Organization	Resident Researcher (Representative)	Affiliated Organization	New. · Conti.
Analysis of the mechanism of LAT1 expression and mTOR activation in ovarian cancer	Masaki Sekine	Hiroshima University	Hideshi Kawakami	Hiroshima University	Conti.
Biological effects of chemicals on endogenous substances in vitro and in vivo	Yaichiro Kotake	Hiroshima University	Nariaki Fujimoto	Hiroshima University	Conti.
Analysis of the interaction between BMP/Smad and TNFa-induced inflammatory signals.	Shizu Tsuchiya	Hiroshima University	Toshiya Inaba	Hiroshima University	New.
The mechanisms of regulation of immune response by exercise	Daisuke Shiiba	Kurashiki University of Science and the Arts	Keiji Tanimoto	Hiroshima University	Conti.
Disaster response among hospital nurses dispatched to evacuation centers in and beyond the Fukushima Prefecture	Toyoaki Sawano	Jyoban Hospital of Tokiwa Foundation	Masaharu Tsubokura	Fukushima Medical University	New.
Search for novel therapeutic targets for knee osteoarthritis	Norimitsu MORIOKA	Hiroshima University	Keiji Tanimoto	Hiroshima University	Conti.
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	New.
The effects of vascular calcification on the central nervous system	HOSHINO Tomonori	Hiroshima University	Keiji Tanimoto	Hiroshima University	Conti.
Neural basis of adaptive behaviors coping stress	Hidenori Aizawa	Hiroshima University	Hideshi Kawakami	Hiroshima University	Conti.
Molecular mechanism of anti-thyroid effects of inorganic iodine in Graves' disease and its escape phenomenon	UCHIDA Toyoyoshi	Juntendo University	Yuji Nagayama	Nagasaki University	Conti.
analysis of Staphylococcus aureus derived from atopic dermatitis and innate immunity	NUMATA TOMOFUMI	Hiroshima university	Osamu Kaminuma	Hiroshima University	Conti.
Elucidation of signaling pathways that contribute to fibrotic stenosis in Crohn's disease	Junya Shiota	Nagasaki University	Yuko Akazawa	Nagasaki University	New.
Understanding the mechanism of cancer cachexia and the development of a comprehensive therapeutic exercise program	MIYAZAKI, Mitsunori	Hiroshima University	Keiji Tanimoto	Hiroshima University	Conti.
A Study on Effects of Low-Dose Radiation for Vascular Function	Hirano Harutoyo	Shizuoka University	Yukihito Higashi	Hiroshima University	Conti.
Profiling of Circulating T cells in Patients with Lymphedema	Hirofumi Imai	Hiroshima University	Tatsuo Ichinohe	Hiroshima University	Conti.
Prolyl isomerases are committed to the onset of both cancer and metabolic syndromes.	Asano Tomoichiro	Hiroshima University	Toshiya Inaba	Hiroshima University	Conti.
Analysis of estrous cycle in common marmoset	Soromaru Yusuke	Hiroshima University	Keiji Tanimoto	Hiroshima University	Conti.

Joint Research Title	Joint Researcher (Representative)	Affiliated Organization	Resident Researcher (Representative)	Affiliated Organization	New. · Conti.
Functional analysis of adrenal tumor expressed genes using human adrenal cell lines.	Oki Kenji	Hiroshima University	Tatsuo Ichinohe	Hiroshima University	Conti.
Research on Tscm cells for therapeutic application in hepatitis	Hiromi Chayama	Hiroshima University	Tatsuo Ichinohe	Hiroshima University	New.
Analysis of transplantation and tumor antigen-specific immune response	OHDAN HIDEKI	Hiroshima University	Satoshi Tashiro	Hiroshima University	New.
Neuroprotective effects of ROCK inhibitors on retinal ganglion cells	Edo Ayaka	Hiroshima University	Satoshi Tashiro	Hiroshima University	New.
Elucidation of epigenetic regulation for brown fat development	Haruya Ohno	Hiroshima University	Akiko Nagamachi	Hiroshima University	Conti.
Investigation of the pathophysiology for hereditary neurological diseases	Masahiro NAKAMORI	Hiroshima University	Kodai Kume	Hiroshima University	Conti.
inducible gene expression system	Teruhisa Fujii	Hiroshima University	Satoshi Tashiro	Hiroshima University	Conti.
Elucidation of intramyocardial calcium dynamics in A kinase anchor protein mutants	Yukiko Nakako	Hiroshima University	Satoshi Tashiro	Hiroshima University	Conti.
Functional analysis of primary cilia using knockout cells.	Koji Ikegami	Hiroshima University	Hideshi Kawakami	Hiroshima University	Conti.
Analysis of the role of innate lymphoid cell in pulmonary arterial hypertension	Nakae Susumu	Hiroshima University	Tatsuo Ichinohe	Hiroshima University	New.
The analysis of cancer genome and circulation tumor DNA for gastrointestinal cancer	Yuji Urabe	Hiroshima University	Akiko Nagamachi	Hiroshima University	Conti.
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	New.
The analysis of adipose specific Ints6 conditional knockout mouse	Yuichiro Otani	Hiroshima University	Tatsuo Ichinohe	Hiroshima University	New.