

Collaborative and Institutional Publications

The following manuscripts are not based on research connected to specific protocols. Rather, they generally represent collaborative work, institutionally authored publications, or publications based on pilot studies. They are arranged by department.

Directors and Chief Scientists

- ◆ Okubo T: Research resources and its future role of the Radiation Effects Research Foundation. Hiroshima ken Naikakai Kaishi [Journal of Hiroshima Naika Medical Association] 2009 (October); No.10:58–9. (Japanese)
- ◆ Okubo T (Editor): MHLW Grants: FY2008 Report. 2009 (July), 81 p. (Japanese)
- ◆ Shore RE: Low-dose radiation epidemiology studies: Status and issues. Health Physics 2009 (November); 97(5):481–6.

Manuscripts in Press

- ⌘ Boice JD, Hendry JH, Nakamura N, Niwa O, Nakamura S, Yoshida K: Low-dose-rate epidemiology of high background radiation areas. Radiation Research.
- ⌘ Nakamura N: Epidemiologic study of atomic-bomb survivors in relation to today's world: A generalized view of radiation carcinogenesis. Hiroshima Igaku [Journal of the Hiroshima Medical Association] (Proceedings of the 50th Late A-bomb Effects Research Meeting, 2009) (Japanese)
- ⌘ Okubo T: Future plans of the Radiation Effects Research Foundation. Hiroshima Igaku [Journal of the Hiroshima Medical Association] (Proceedings of the 50th Late A-bomb Effects Research Meeting, 2009) (Japanese)
- ⌘ Rühm W, Wallner A, Cullings HM, Egbert SD, El-Faramawy N, Faestermann T, Kaul DC, Knie K, Korschinek G, Nakamura N, Roberts JA, Rugel G: ^{41}Ca in tooth enamel. Part II: A means for retrospective biological neutron dosimetry in atomic bomb survivors. Radiation Research.
- ⌘ Wallner A, Ruhm W, Rugel G, Nakamura N, Arazi A, Faestermann T, Knie K, Maier HJ, Korschinek G: ^{41}Ca in tooth enamel. Part I: A biological signature of neutron exposure in atomic-bomb survivors. Radiation Research.

Clinical Studies, Hiroshima

- ◆ Hagino H, Furukawa K, Fujiwara S, Okano T, Katagiri H, Yamamoto K, Teshima R: Recent trends in the incidence and lifetime risk of hip fracture in Tottori, Japan. Osteoporosis International 2009 (April); 20(4):543–8.
- ◆ Hagino H, Nakamura T, Fujiwara S, Oeki M, Okano T, Teshima R: Sequential change in quality of life for patients with incident clinical fractures: A prospective study. Osteoporosis International 2009 (May); 20(5):695–702.
- ◆ Japan Arteriosclerosis Longitudinal Study (JALS) Group (RERF: Yamada M): Four blood pressure indexes and the risk of stroke and myocardial infarction in Japanese men and women: A meta-analysis of 16 cohort studies. Circulation 2009 (April); 119(14):1892–8.
- ◆ Kumamoto K, Nakamura T, Suzuki T, Gorai I, Fujinawa O, Ohta H, Shiraki M, Yoh K, Fujiwara S, Endo N, Matsumoto T: Validation of the Japanese osteoporosis quality of life questionnaire. Journal of Bone and Mineral Metabolism 2010 (January); 28(1):1–7.

- ◆ Ohishi W, Chayama K: Current treatment for chronic hepatitis B in Japan. Clinical Journal of Gastroenterology 2009 (October); 2(5):325–30.
- ◆ Ohishi W, Tsuge M, Chayama K: Hepatitis B virus genotypes and prognosis of chronic hepatitis B. Rinsho Shokaki Naika [Clinical Gastroenterology] 2009 (June); 24(6):653–9. (Japanese)

Manuscript in Press

- ⌘ Ohishi W, Chayama K: Hepatitis C virus RNA and nucleic acid testing. Nippon Rinsho [Japanese Journal of Clinical Medicine]

Clinical Studies, Nagasaki

Manuscripts in Press

- ⌘ Ishii R, Imaizumi M, Ide A, Sera N, Ueki I, Horie I, Ando T, Usa T, Ejima E, Ashizawa K, Eguchi K: A long-term follow-up of serum myeloperoxidase anti-neutrophil cytoplasmic antibodies (MPO-ANCA) in patients with Graves disease treated with propylthiouracil. Journal of Endocrinology.
- ⌘ Hida A, Imaizumi M, Sera N, Akahoshi M, Soda M, Maeda R, Nakashima E, Nakamura H, Ida H, Kawakami A, Eguchi K: Association of human T lymphotropic virus type I with Sjögren syndrome. Annals of the Rheumatic Diseases.
- ⌘ Tasaki M, Yamashita Y, Watanabe Y, Mitsuoka T, Fukui M, Yamasaki A, Hida A, Akahoshi M, Kawakami A, Eguchi K: Effects of examination techniques and room conditions on Schirmer and Saxon tests. Kango Gijutsu [Japanese Journal of Nursing Arts] (Japanese)

Genetics

- ◆ Kodaira M, Ryo H, Kamada N, Furukawa K, Takahashi N, Nakajima H, Nomura T, Nakamura N: No evidence of increased mutation rates at microsatellite loci in offspring of A-bomb survivors. Radiation Research 2010 (February); 173(2):205–13. (RR 9-09)

Radiobiology/Molecular Epidemiology

- ◆ Asia Pacific Cohort Studies Collaboration (RERF: Nakachi K): Blood pressure is a major risk factor for renal death: An analysis of 560 352 participants from the Asia-Pacific region. Hypertension 2009 (September); 54(3):509–15.
- ◆ Hattori N, Hayashi T, Nakachi K, Ichikawa H, Goto C, Tokudome Y, Kuriki K, Hoshino H, Shibata K, Yamada N, Tokudome M, Suzuki S, Nagaya T, Kobayashi M, Tokudome S: Changes of ROS during a two-day ultra-marathon race. International Journal of Sports Medicine 2009 (June); 30(6):426–9.
- ◆ Kawasaki A, Hayashi T, Nakachi K, Trosko JE, Sugihara K, Kotake Y, Ohta S: Modulation of connexin 43 in rotenone-induced model of Parkinson's disease. Neuroscience 2009 (April); 160(1):61–8.

- ◆ Shikauchi Y, Saiura A, Kubo T, Niwa Y, Yamamoto J, Murase Y, Yoshikawa H: SALL3 interacts with DNMT3A and shows the ability to inhibit CpG island methylation in hepatocellular carcinoma. *Molecular and Cellular Biology* 2009 (April); 29(7):1944–58.
- ◆ Tamakoshi A, Suzuki K, Lin YS, Ito Y, Yagyu K, Kikuchi S, Watanabe Y, Inaba Y, Tajima K, Nakachi K: Cigarette smoking and serum soluble Fas levels: Findings from the JACC study. *Mutation Research* 2009 (September-October); 679(1-2):79–83.
- ◆ Yuasa Y, Nagasaki H, Akiyama Y, Hashimoto Y, Takizawa T, Kojima K, Kawano T, Sugihara K, Imai K, Nakachi K: DNA methylation status is inversely correlated with green tea intake and physical activity in gastric cancer patients. *International Journal of Cancer* 2009 (June); 124(11):2677–82.

Statistics

- ◆ Furukawa K, Cologne JB, Shimizu Y, Ross NP: Predicting future excess events in risk assessment. *Risk analysis* 2009 (June); 29(6):885–99. (RR 6-08)
- ◆ Heidenreich WF, Cullings HM: Use of the individual data of the a-bomb survivors for biologically based cancer models. *Radiation and Environmental Biophysics* 2010 (March); 49(1):39–46.
- ◆ Yu CL, Tucker MA, Abramson DH, Furukawa K, Seddon JM, Stovall M, Fraumeni JF, Kleinerman RA: Cause-specific mortality in long-term survivors of retinoblastoma. *Journal of the National Cancer Institute* 2009 (April); 101(8):581–91.

Manuscript in Press

- ⌘ Cologne JB, Cullings HM, Furukawa K, Ross NP: Attributable risk for radiation in the presence of other risk factors. *Health Physics*.

Collaborative and Institutional Oral Presentations

The following oral presentations were not linked to specific research protocols but based on pilot studies, or represent collaborative work with outside organizations and general research activities. They are arranged by department.

Directors and Chief Scientists

- ❖ Shore RE. Cataract risk at low-to-moderate radiation doses: (Not) seeing is believing. Late Health Effects of Ionizing Radiation, 4–6 May 2009, Washington DC, USA
- ❖ Shore RE. Thoughts on estimating radiation doses from an epidemiologic perspective. “Impact of Uncertainty in Dose to the Dose Response” Workshop, 8 May 2009, Washington DC, USA
- ❖ Shore RE. Research on cardiovascular disease among atomic bomb survivors. The 2nd Asian Congress of Radiation Research, 17–20 May 2009, Seoul, South Korea
- ❖ Nakamura N. Epidemiologic study of A-bomb survivors and its association with the world. The 50th Late A-bomb Effects Research Meeting, 7 June 2009, Hiroshima
- ❖ Okubo T. Future plans of the Radiation Effects Research Foundation. The 50th Late A-bomb Effects Research Meeting, 7 June 2009, Hiroshima
- ❖ Double EB. Contributions of ABCC/RERF and the Japanese A-bomb survivors to human radiation epidemiology. The Scholars-in-Training (SIT) Workshop, the 55th Annual Meeting of the Radiation Research Society, 3 October 2009, Savannah, Georgia, USA
- ❖ Okubo T. Radiation Effects Research Foundation, its achievements and future plan. Ramazzini Days 2009, 24–25 October 2009, Carpi, Italy

Clinical Studies, Hiroshima

- ❖ Neriiishi K. Risk communication with residents around nuclear power companies—From epidemiological studies of A-bomb survivors. Liaison Meeting of the Radiation Emergency Medical Institutes in Ibaraki Prefecture, 18 April 2009, Mito

Clinical Studies, Nagasaki

- ❖ Oka N. Current status and future of standardization of urinary sediment analysis—In relation to RBC morphology. The 44th Japanese Association of Medical Technologists Congress in Kyushu, 10–11 October 2009, Sasebo

Radiobiology/Molecular Epidemiology

- ❖ Taga M, Ito R, Misumi M, Nakachi K, Yasui W, Hamatani K. DNA methylation of cancer-related genes in non-small cell lung cancer among atomic-bomb survivors. The 52nd Annual Meeting of the Japan Radiation Research Society, 11–13 November 2009, Hiroshima

Epidemiology, Hiroshima

- ❖ Nonaka Y. Variable selection in logistic discrimination based on regularized local likelihood method. The 2009 Autumn Meeting of the Mathematical Society of Japan, 24–27 September 2009, Osaka
- ❖ Ozasa K. Issues associated with evaluating the effectiveness of influenza vaccination by observational studies. The 68th Annual Meeting of the Japanese Society

of Public Health, 21–23 October 2009, Nara

- ❖ Ozasa K. Epidemiological evaluation of late health effects of radiation. FY2009 Seminar of Biostatistics Center, 12 March 2010, Minamioguni-machi, Kumamoto

Statistics

- ❖ Cullings HM, Jacquez G, Lawson A, Patil G. Hiroshima-Nagasaki atomic bombing radiation effects hotspot biogeoinformatics and public health policy. 2009 Joint Statistical Meetings, 1–6 August 2009, Washington DC, USA

Information Technology

- ❖ Katayama H. Construction of the standard database system for the regional cancer registries in Japan. The 31st Annual Meeting of the International Association of Cancer Registries, 3–5 June 2009, New Orleans, Louisiana, USA

Scientific Lectures and Seminars Presented at RERF

1 April 2009–31 March 2010

The following presentations were made during the fiscal year by researchers internal and external to RERF at the Hiroshima Laboratory. They appear in chronological order.

10 April 2009, **Kyoji Furukawa**, Associate Senior Scientist, Department of Statistics, Radiation Effects Research Foundation, The 247th Hiroshima Statistics Study Group: “A comparison of approaches to bias correction in dose-response analysis with regression models involving covariate errors”

15 April 2009, **Ryo Kawasaki**, Clinical and Research Fellow/Grading Centre Manager, RetVIC, Centre for Eye Research Australia, University of Melbourne, Australia: “Retinal microvascular signs as biomarkers of cardiovascular disease”

5 June 2009, **Isao Higuchi**, Assistant Professor, Department of Artificial Complex Systems Engineering, Graduate School of Engineering, Hiroshima University, The 248th Hiroshima Statistics Study Group: “Maxima and minima of generalized overall survival functions”

19 June 2009, **Janko Nikolic-Zugich**, Chairman, Department of Immunobiology, Co-Director, Arizona Center on Aging, and Elizabeth Bowman Professor in Medical Research, College of Medicine, University of Arizona, U.S.A.: “T-cell function and homeostasis in immune senescence: Causes and consequences” (Distinguished Lecture)

26 June 2009, **Akira Asano**, Professor, Department of Information Engineering, Graduate School of Engineering, Hiroshima University, The 249th Hiroshima Statistics Study Group: “Texture analysis based on mathematical morphology and MDL principle”

3 July 2009, **Shingo Nakamura**, Research Scientist, Department of Radiobiology, Institute for Environmental Sciences: “Adiposity in female B6C3F1 mice continuously irradiated with low-dose-rate γ -ray”

20 August 2009, **Kanya Hamasaki**, Senior Technician, Laboratory of Immunology, Department of Radiobiology/Molecular Epidemiology, Radiation Effects Research Foundation: “Cytogenetic instability in peripheral blood T lymphocytes of A-bomb survivors”

7 September 2009, **Ravindra Khattree**, Professor, Department of Mathematics and Statistics, and Participating Investigating Member, Center for Biomedical Research, Oakland University, U.S.A.: “Analysis of world mental health data: Smoking and mental health in Mexico”

11 September 2009, **Yoshisuke Nonaka**, Visiting Research Fellow, Department of Epidemiology, Radiation Effects Research Foundation, The 250th Hiroshima Statistics Study Group: “Selection of relative risk model based on information criterion and application to the Life

Span Study data”

30 October 2009, **Hirofumi Wakaki**, Professor, Department of Mathematics, Graduate School of Science, Hiroshima University, The 251st Hiroshima Statistics Study Group: “An asymptotic expansion of the local power of a general test for testing a general covariance structure”

16 November 2009, **Robert D. Abbott**, Professor, Department of Biostatistics/Epidemiology, School of Medicine, University of Virginia, U.S.A.: “Excessive daytime sleepiness and the incidence of Parkinson’s disease: Findings from the Honolulu-Asia Aging Study”

4 December 2009, **Kengo Kato**, Assistant Professor, Department of Mathematics, Graduate School of Science, Hiroshima University, The 252nd Hiroshima Statistics Study Group: “On estimation of the asymptotic covariance matrix in quantile regression”

18 December 2009, **Wan-Ling Hsu**, Research Scientist, Department of Statistics, Radiation Effects Research Foundation, The 253rd Hiroshima Statistics Study Group: “Application of joint modeling on radiation, inflammation, and solid cancer incidence”

20 January 2010, **Junko Kajimura**, Research Associate, Department of Medical Pharmacy, Faculty of Pharmacy, Yasuda Women’s University: “*In vivo* and *in vitro* studies of the effect of Rev1 overexpression on mutagenesis and tumorigenesis”

5 February 2010, **Eisuke Inoue**, Division of Biostatistics, Graduate School of Pharmaceutical Sciences, Kitasato University, The 254th Hiroshima Statistics Study Group: “Analysis of disease activity in patients with rheumatoid arthritis and mortality using the change-point model”

17 March 2010, **Peter W. Laird**, Director, USC Epigenome Center, Keck School of Medicine, University of Southern California, U.S.A.: “The cancer epigenome: Origins and applications” (Distinguished Lecture)

24 March 2010, **Gordon K. Livingston**, Technical Director, Cytogenetics Biodosimetry Laboratory, Radiation Emergency Assistance Center/Training Site, Oak Ridge Institute for Science and Education, U.S.A.: “An internet-based strategy to support rapid dose assessment in a radiation emergency”

24 March 2010, **Horst Romm**, Head, Biological Dosimetry Laboratory, Federal Office for Radiation Protection, Germany: “Experience with biological dosimetry in Germany and activities to get prepared in case of a large scale radiation accident”

RERF Colloquia (FY2009)

Rather than formal seminars, RERF Colloquia are presentations mainly focused on preliminary or ongoing studies, with the aim of obtaining constructive ideas from RERF researchers.

17 April 2009, **Kyaji Furukawa**, Associate Senior Scientist, Department of Statistics, "Interaction effects of radiation and smoking on lung cancer risks among atomic-bomb survivors"

17 April 2009, **Dale L. Preston**, Principal Scientist, HiroSoft International Corporation, U.S.A., "Radiation effects on lung cancer by histological subtypes"

15 May 2009, **Asao Noda**, Chief, Laboratory of Cytogenetics, Department of Genetics, "Dynamics of generation of unrepairable double strand breaks and its implications to cell survival"

17 July 2009, **Reiko Ito**, Research Scientist, Laboratory of Cell Biology, Department of Radiobiology/Molecular Epidemiology, "Analyses of colorectal cancer among atomic-bomb survivors by immunohistochemistry"

21 August 2009, **Kazuo Neriishi**, Assistant Chief, Department of Clinical Studies, "Glaucoma in A-bomb survivors"

18 September 2009, **Ritsu Sakata**, Research Scientist, Department of Epidemiology, "Extended follow-up for cancer mortality in a cohort of women who received radiotherapy for benign gynecologic disorders"

18 September 2009, **Fumiyoshi Kasagi**, Assistant Chief, Department of Epidemiology, "In utero mortality"

23 October 2009, **Roy E. Shore**, Vice Chairman and Chief of Research, "Methodologic issues and recommendations for RERF"

20 November 2009, **Eiji Nakashima**, Assistant Chief, Department of Statistics, "Re-analysis of cataract data 2000–2002 by Merriam-Focht Method"

20 November 2009, **Wan-Ling Hsu**, Research Scientist, Department of Statistics, "Application of joint model—radiation, inflammation, and cancer incidence"

18 December 2009, **Mieko Kodaira**, Chief, Laboratory of Biochemical Genetics, Department of Genetics, "Genetic effects of A-bomb radiation: A small scale pilot study screening for germline mutations at microsatellites"

29 January 2010, **Kengo Yoshida**, Research Scientist, Laboratory of Immunology, Department of Radiobiology/Molecular Epidemiology, "Impact of NKG2D genotypes on individual differences in immunological functions among atomic-bomb survivors"

Awards Received by RERF Employees

1 April 2009–31 March 2010

22 April 2009, **Yoshimi Tatsukawa**, Research Scientist, Department of Clinical Studies, Hiroshima, received an Education Award from the Department of Molecular Internal Medicine, Hiroshima University.

20 May 2009, **Hiroyuki Ryukaku**, Group Leader, Division of Clinical Laboratories, Department of Clinical Studies, Hiroshima, received a Hiroshima Prefectural Award for Distinguished Hazardous Materials Officer.

25 May 2009, **Misa Imaizumi**, Chief, Division of Radiology, Department of Clinical Studies, Nagasaki, received the 26th Tsunoo Scientific Prize from the Nagasaki University School of Medicine.

8 June 2009, the RERF's general pamphlet "Basic Guide to Radiation and Health Sciences" won the 30th Hiroshima Advertisement Planning and Production Award (silver prize) from the Hiroshima Advertising Agencies Association.

3–4 September 2009, at the 18th General Assembly/Workshop of the Japanese Association of Cancer Registries held in Niigata, **Hiromi Sugiyama**, Research Scientist, Department of Epidemiology, Hiroshima, received an Excellence in Scientific Poster Award. **Toyonobu Yamada**, Section Chief, Tumor and Tissue Registry Office, Department of Epidemiology, Nagasaki, received an Excellence in Prefectural Poster Award.

11–13 October 2009, **Michiko Yamada**, Assistant Chief, Department of Clinical Studies, Hiroshima, received the Best Scientist Award at the 3rd International Congress of the Asian Society against Dementia, held in Seoul, South Korea.

6 November 2009, **Kazuo Neriishi**, Assistant Chief, Department of Clinical Studies, Hiroshima, received a MEXT Minister's Award—Distinguished Service for Nuclear Safety Management—from the Ministry of Education, Culture, Sports, Science and Technology (MEXT).

FY2009 External Research Funds

| Name of Outside Organization | Number of Grants | Actual Amounts of Funding Total |
|---|------------------|---------------------------------|
| Ministry of Health, Labour and Welfare (MHLW) | 19 | ¥30,900,000 |
| Ministry of Education, Culture, Sports, Science and Technology (MEXT) | 14 | ¥33,250,000 |
| National Institute on Biomedical Innovation | 1 | ¥7,000,000 |
| Japan Arteriosclerosis Prevention Fund | 1 | ¥2,000,000 |
| Smoking Research Foundation | 1 | ¥2,000,000 |
| Princess Takamatsu Cancer Research Fund | 1 | ¥2,000,000 |
| US National Cancer Institute (NCI) Contract | 1 | ¥29,186,323 |
| US National Institute of Allergy and Infectious Diseases | 1 | ¥14,824,251 |
| Grand Total | 39 | ¥121,160,574 |

Note 1: This amount includes indirect cost.

Note 2: These amounts may include subsidies allocated to collaborators.

Note 3: In a few cases, persons from multiple departments were independently funded under an umbrella grant. In such cases, the counts of numbers of grants include them as multiple grants.

FY2009 Externally Funded Research

| Title of Research | Name and Location of Entrusting Outside Organization and Chief of Research Group or Principal Investigator in Charge | Collaborator(s) at RERF | Study Period | Actual Amount of Funding |
|---|--|-------------------------------------|--------------------------------|---|
| Department of Clinical Studies, Hiroshima Research into assessment of and measures for health effects from indoor radon | MHLW Scientific Research Grant Research on Health Security Control Gen Suzuki, Professor, Clinic, International University of Health and Welfare | Saeko Fujiwara | 1 April 2009– 31 March 2010 | ¥4,500,000 Expenses for transportation, etc. |
| A follow-up study of knee and back pain and bone fractures in a large cohort of residents with regional representativeness, for prevention of the need for nursing care among the elderly | MHLW Scientific Research Grant Comprehensive Research on Aging and Health Noriko Yoshimura, Visiting Associate Professor, The University of Tokyo Graduate School of Medicine | Saeko Fujiwara | 1 April 2009– 31 March 2010 | ¥4,500,000 |
| Study of motor disturbances (fractures, joint disorders) in the elderly (including those with dementia or other diseases) | MHLW Longevity Healthcare Study Entrustmen Project Atsushi Harada, Department Chief, National Hospital for Geriatric Medicine, National Center for Geriatrics and Gerontology | Saeko Fujiwara | 1 April 2009– 31 March 2010 | ¥8,500,000 |
| Prediction and diagnosis of fractures and development of medicines targeting bone quality | National Institute on Biomedical Innovation Program for Promotion of Basic Research in the Field of Health Care Research Project Application Procures Chief of Research Group: Kyoji Ikeda, Department Chief, National Center of Geriatrics and Gerontology Principal Investigator: Saeko Fujiwara, Chief, Department of Clinical Studies, RERF | Waka Ohishi | 1 April 2009– 31 March 2010 | ¥7,000,000 |
| Study for development of a lifestyle diseases prevention database through a large-scale cohort-based collaborative study, and for its high-degree application | MHLW Scientific Research Grant Comprehensive Research on Cardiovascular and Lifestyle-related Diseases Hirotugu Ueshima, Special Contract Professor, Lifestyle-related Disease Prevention Center, Shiga University of Medical Science | Michiko Yamada | 1 April 2009– 31 March 2010 | ¥2,200,000 |
| Longitudinal/cross-sectional studies to generate evidence for diagnosis/management of metabolic syndrome to be used for health guidance | MHLW Scientific Research Grant Comprehensive Research on Cardiovascular and Lifestyle-related Diseases Takashi Kadokawa, Professor, The University of Tokyo Graduate School of Medicine | Michiko Yamada Yoshimi Tatsukawa | 1 April 2009– 31 March 2010 | ¥2,400,000 |
| Atherosclerosis, dementia and ADL evaluations among the Adult Health Study subjects | Japan Arteriosclerosis Prevention Fund Scientific Research Grant Chief of Research Group: Hirotugu Ueshima, Special Contract Professor, Lifestyle-related Disease Prevention Center, Shiga University of Medical Science Principal Investigator: Michiko Yamada, Assistant Chief, Department of Clinical Studies, RERF | Saeko Fujiwara | 1 April 2009– 31 March 2010 | ¥2,000,000 The above amount includes funds allocated to the collaborator(s) at Hiroshima University. |

FY2009 Externally Funded Research

| Title of Research | Name and Location of Entrusting Outside Organization and Chief of Research Group or Principal Investigator in Charge | Collaborator(s) at RERF | Study Period | Actual Amount of Funding |
|---|--|--|--------------------------------|---|
| Department of Clinical Studies, Hiroshima A case-control study of lifestyle and insulin resistance as risk factors for hepatocellular carcinoma | MEXT Grant-in-Aid for Scientific Research Scientific Research (C) Waka Ohishi, Chief, Division of Clinical Laboratories, Department of Clinical Studies, RERF | Saeko Fujiwara | 1 April 2009– 31 March 2010 | Direct cost ¥1,100,000 Indirect cost ¥330,000 |
| Department of Genetics Establishment of cytogenetic study network for radiation accident | MEXT Grant-in-Aid for Scientific Research Mitsutaki Yoshida, Head, Biodosimetry Section, Department of Radiation Dosimetry, Research Center for Radiation Emergency Medicine, National Institute of Radiological Sciences | Yoshiaki Kodama | 15 June 2009– 14 June 2010 | Expenses for supplies (¥700,000 equivalent) |
| Analysis of the <i>in vivo</i> mechanisms to establish radiation-induced mutagenesis | MEXT Grant-in-Aid for Scientific Research (S) Hiroshi Mita, Professor, Graduate School of Frontier Sciences, The University of Tokyo | Asao Oda | 1 April 2009– 31 March 2010 | Direct cost ¥3,000,000 Indirect cost ¥900,000 |
| An animal model for evaluation of genetic risk of radiation in human females | MEXT Grant-in-Aid for Scientific Research Scientific Research (B) Jun-ichi Asakawa, Research Scientist, Department of Genetics, RERF | | 1 April 2009– 31 March 2010 | Direct cost ¥4,600,000 Indirect cost ¥1,380,000 |
| Department of Radiobiology/Molecular Epidemiology Molecular epidemiology cohort study on cancer development and immunity | MEXT Grant-in-Aid for Scientific Research Specific Research on Priority Areas Kei Nakachi, RERF Consultant and Project Principal Scientist | Yoichiro Kusunoki Tomonori Hayashi Kiyohiro Hamatani | 1 April 2009– 31 March 2010 | ¥7,000,000 The above amount includes funds allocated to the collaborator(s). |
| Evaluation of genetic instability and radiation sensitivity in human hematolymphoid cells among the atomic-bomb survivor cohort | MEXT Grant-in-Aid for Scientific Research Scientific Research (B) Yoichiro Kusunoki, Acting Chief, Department of Radiobiology/Molecular Epidemiology, RERF | Kazue Inai Kengo Yoshida Kanya Hamasaki, (Department of Genetics) | 1 April 2009– 31 March 2010 | Direct cost ¥2,800,000 Indirect cost ¥840,000 The above amount includes funds allocated to the collaborator(s). |
| Radiation effects on immunological aging and intracellular reactive oxygen species | MEXT Grant-in-Aid for Scientific Research Exploratory Research Tomonori Hayashi, Chief, Immunology Laboratory, Department of Radiobiology/Molecular Epidemiology, RERF | Kei Nakachi (RERF Consultant and Project Principal Scientist) Kengo Yoshida | 1 April 2009– 31 March 2010 | ¥900,000 The above amount includes funds allocated to the collaborator(s). |

FY2009 Externally Funded Research

| Title of Research | Name and Location of Entrusting Outside Organization and Chief of Research Group or Principal Investigator in Charge | Collaborator(s) at RERF | Study Period | Actual Amount of Funding |
|---|--|---|---|--|
| Department of Radiobiology/Molecular Epidemiology Molecular epidemiology study on immunogenetic and environmental factors involved in risks of inflammation-associated diseases | MEXT Grant-in-Aid for Scientific Research Scientific Research (B) Tomonori Hayashi, Chief, Immunology Laboratory, Department of Radiobiology/Molecular Epidemiology, RERF | Associate Investigators: Kei Nakachi (RERF Consultant and Project Principal Scientist) Yoichiro Kusunoki Takahiko Ogawa | 1 April 2009–31 March 2010 | Direct cost ¥5,000,000 Indirect cost ¥1,500,000 |
| Molecular oncological study of thyroid cancer among atomic-bomb survivors | MEXT Grant-in-Aid for Scientific Research Scientific Research (C) Kiyohiro Hamatani, Chief, Cell Biology Laboratory, Department of Radiobiology/Molecular Epidemiology, RERF | Reiko Ito Associate Investigator: Midori Soda (Department of Epidemiology, Nagasaki) | 1 April 2009–31 March 2010 | Direct cost ¥700,000 Indirect cost ¥210,000 |
| Molecular oncological study on lung cancer among Abomb survivors | MEXT Grant-in-Aid for Scientific Research Young Investigators (B) Masataka Taga, Research Scientist, Cell Biology Laboratory, Department of Radiobiology/Molecular Epidemiology, RERF | | The above amount includes funds allocated to the collaborator(s). | |
| Host factors involving gastric carcinogenesis and their relationship with lifestyle | MEXT Grant-in-Aid for Scientific Research Specific Research on Priority Areas Yasutomo Yuasa, Professor, Tokyo Medical and Dental University Graduate School | Associate Investigator: Kazue Imai | 1 April 2009–31 March 2010 | Direct cost ¥1,300,000 Indirect cost ¥390,000 |
| Elucidation of molecular mechanism in carcinogenesis in relation to radiation disorder and its application to prevention/treatment | MHLW Scientific Research Grant Research Project for the Third Anti-cancer Strategy Wataru Yasui, Professor, Division of Molecular Medical Science, Graduate School of Biomedical Sciences, Hiroshima University | Tomonori Hayashi Yoichiro Kusunoki Kiyohiro Hamatani | 1 April 2009–31 March 2010 | Since this person is an associate investigator, research funds were not allocated to her. Direct cost ¥5,000,000 |
| Molecular epidemiology of lifestyle-related diseases in relation to biological effects of cigarette smoking, using the data from a general population cohort study | Smoking Research Foundation Tomonori Hayashi, Chief, Immunology Laboratory, Department of Radiobiology/Molecular Epidemiology, RERF | | 1 April 2009–31 March 2010 | ¥2,000,000 |

FY2009 Externally Funded Research

| Title of Research | Name and Location of Entrusting Outside Organization and Chief of Research Group or Principal Investigator in Charge | Collaborator(s) at RERF | Study Period | Actual Amount of Funding |
|---|--|---|--|--|
| Department of Radiobiology/Molecular Epidemiology Molecular mechanisms on radiation carcinogenesis—colon cancer and papillary thyroid cancer among A-bomb survivors Studies of immunosenescence and other late effects of acute ionizing radiation exposure in atomic-bomb survivors | Princess Takamatsu Cancer Research Fund Kiyohiro Hamatani, Chief, Cell Biology Laboratory, Department of Radiobiology/Molecular Epidemiology, RERF US National Institute of Allergy and Infectious Diseases Principal Investigator: Kei Nakachi, RERF Consultant and Project Principal Scientist Co-Principal Investigators: Yoichiro Kusunoki, Acting Chief, Department of Radiobiology/Molecular Epidemiology, RERF, Tomonori Hayashi, Chief, Immunology Laboratory, Department of Radiobiology/Molecular Epidemiology, RERF | Reiko Ito Kei Nakachi (RERF Consultant and Project Principal Scientist) Evan B. Double (Associate Chief of Research) Kazue Inai Kengo Yoshida Reiko Ito Saeko Fujiiwara (Department of Clinical Studies) Waka Ohishi (Department of Clinical Studies) Kotaro Ozasa (Department of Epidemiology) Kyoji Furukawa (Department of Statistics) Munechika Misumi (Department of Statistics) | 1 April 2009–31 March 2010 1 October 2009–30 September 2014 | ¥2,000,000 Direct cost ¥10,316,113 Indirect cost ¥4,508,138 |
| Department of Epidemiology, Hiroshima Immuno-epidemiological study of cedar pollen allergy Evaluation of risk of lifestyle for rare cancers by a large-scale cohort study | MEXT Grant-in-Aid for Scientific Research Scientific Research (C) Kotaro Ozasa, Chief, Department of Epidemiology, RERF MEXT Grant-in-Aid for Scientific Research Specific Research on Priority Areas Akiko Tamakoshi, Professor, Public Health, Aichi Medical University | Associate Investigator: Kotaro Ozasa Kotaro Ozasa | 1 April 2009–31 March 2010 1 April 2009–31 March 2010 | ¥100,000 Indirect cost ¥30,000 Since this person is an associate investigator, research funds were not allocated to him. MHLW Scientific Research Grant Research on Emerging and Re-emerging Infectious Diseases as New Influenza Yoshio Hirota, Professor, Graduate School of Medicine, Osaka City University |

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| Title of Research | Name and Location of Entrusting Outside Organization and Chief of Research Group or Principal Investigator in Charge | Collaborator(s) at RERF | Study Period | Actual Amount of Funding |
|---|---|---|--------------------------------|---|
| Department of Epidemiology, Hiroshima Research on effects of diet and nutrition intake on healthy life expectancy of elderly people: Follow-up studies of NIPPON DATA 80 · 90 | MHLW Scientific Research Grant Comprehensive Research on Aging and Health Hirotugu Ueshima, Special Contract Professor, Lifestyle-related Disease Prevention Center, Shiga University of Medical Science | Fumiyoshi Kasagi | 1 April 2009– 31 March 2010 | ¥250,000 |
| Study on the molecular mechanism of radiation-induced cancer | MHLW Cancer Research Grant Shun-ichi Yamashita, Professor, Department of Molecular Medicine, Atomic Bomb Disease Institute, Nagasaki University Graduate School of Biomedical Sciences | Fumiyoshi Kasagi | 1 April 2009– 31 March 2010 | ¥1,500,000 |
| Research on assessment of health effects and countermeasures against indoor radon | MHLW Scientific Research Grant Health and Safety/Crisis-management Task General Research Gen Suzuki, Professor, Clinic, International University of Health and Welfare | Fumiyoshi Kasagi | 1 April 2009– 31 March 2010 | Expenses for transportation, supplies, etc. |
| Study for development of a lifestyle diseases prevention database through a large-scale cohort-based collaborative study, and for its high-degree application | MHLW Scientific Research Grant Comprehensive Research on Cardiovascular and Lifestyle-related Diseases Hirotugu Ueshima, Special Contract Professor, Lifestyle-related Disease Prevention Center, Shiga University of Medical Science | Associate Investigator: Fumiyoshi Kasagi | 1 April 2009– 31 March 2010 | Since this person is an associate investigator, research funds were not allocated to him. |
| Study on utilization of population-based cancer registry data for cancer control and cancer research | MHLW Cancer Research Grant Team of Research Group for Population-based Cancer Registries Akiko Ioka, Assistant Section Chief, Department of Cancer Control and Statistics, Osaka Medical Center for Cancer and Cardiovascular Diseases | Hironi Sugiyama | 1 April 2009– 31 March 2010 | ¥800,000 |
| Elucidation of molecular mechanism in solid cancer in relation to radiation disorder and its application to prevention/treatment | MHLW Scientific Research Grant Research Project for the Third Anti-cancer Strategy Wataru Yasui, Professor, Division of Genome Radiobiology and Medical Science, Graduate School of Biomedical Sciences, Hiroshima University | Kotaro Ozasa | 1 April 2009– 31 March 2010 | ¥700,000 |
| Research on the current status of cancer incidence/mortality trends | MHLW Scientific Research Grant Research Project for the Third Anti-cancer Strategy Tomotaka Sobue, Chief, Cancer Information Services and Surveillance Division, Center for Cancer Control and Information Services, National Cancer Center | Hironi Sugiyama | 1 April 2009– 31 March 2010 | ¥1,100,000 |

FY2009 Externally Funded Research

| Title of Research | Name and Location of Entrusting Outside Organization and Chief of Research Group or Principal Investigator in Charge | Collaborator(s) at RERF | Study Period | Actual Amount of Funding |
|---|---|---|--------------------------------|--|
| Department of Epidemiology, Nagasaki Study on utilization of population-based cancer registry data for cancer control and cancer research | MHLW Cancer Research Grant Team of Research Group for Population-based Cancer Registries Akiko Ioka, Assistant Section Chief, Department of Cancer Control and Statistics, Osaka Medical Center for Cancer and Cardiovascular Diseases | Midori Soda | 1 April 2009– 31 March 2010 | ¥1,000,000 |
| Research on the current status of cancer incidence/mortality trends | MHLW Scientific Research Grant Research Project for the Third Anti-cancer Strategy Tomotaka Sobue, Chief, Cancer Information Services and Surveillance Division, Center for Cancer Control and Information Service, National Cancer Center | Midori Soda | 1 April 2009– 31 March 2010 | ¥1,000,000 |
| Department of Information Technology Construction of the epidemiological database for the people living in Semipalatinsk test site area | MEXT Grant-in-Aid for Scientific Research Scientific Research (C) Hiroaki Katayama, Chief, Department of Information Technology, RERF | | 1 April 2009– 31 March 2010 | Direct cost ¥900,000 Indirect cost ¥270,000 |
| Research on the current status of cancer incidence/mortality trends | MHLW Scientific Research Grant Research Project for the Third Anti-cancer Strategy Tomotaka Sobue, Chief, Cancer Information Services and Surveillance Division, Center for Cancer Control and Information Services, National Cancer Center | Cooperative Investigator: Hiroaki Katayama | 1 April 2009– 31 March 2010 | Since this person is a cooperative investigator, research funds were not allocated to him. |

FY2009 Externally Funded Research

| Title of Research | Name and Location of Entrusting Outside Organization and Chief of Research Group or Principal Investigator in Charge | Collaborator(s) at RERF | Study Period | Actual Amount of Funding |
|--|--|---|--|---------------------------------------|
| Other Offices Support for epidemiological studies of cancer among atomic-bomb survivors NCI Contract N01-CP-31012 Principal Investigator: Kazunori Kodama, Chief Scientist, RERF Co-principal Investigator: Roy E. Shore, Vice Chairman and Chief of Research, RERF | National Cancer Institute (NCI) Contract National Cancer Institute, Bethesda, Maryland, USA Shoji Tokuoka (RERF Consultant) Fumiyo Shi Kasagi (Department of Epidemiology) Akihiko Suyama (Department of Epidemiology, Nagasaki) Nobuo Nishi (Department of Epidemiology) Midori Soda (Department of Epidemiology, Nagasaki) Norman P. Ross (Department of Statistics) Harry M. Cullings (Department of Statistics) Wan-Ling Hsu (Department of Statistics) Kyoji Furukawa (Department of Statistics) Hiroaki Katayama (Department of Information Technology) Yuko Hirai (Department of Genetics) Yoichiro Kusunoki (Department of Radiobiology/Molecular Epidemiology) Kiyohiro Hamatani (Department of Radiobiology/Molecular Epidemiology) Saeko Fujiwara (Department of Clinical Studies) | Evan B. Doubek (Associate Chief of Research) Nori Nakamura (Chief Scientist) Shoji Tokuoka (RERF Consultant) Fumiyo Shi Kasagi (Department of Epidemiology) Akihiko Suyama (Department of Epidemiology, Nagasaki) Nobuo Nishi (Department of Epidemiology) Midori Soda (Department of Epidemiology, Nagasaki) Norman P. Ross (Department of Statistics) Harry M. Cullings (Department of Statistics) Wan-Ling Hsu (Department of Statistics) Kyoji Furukawa (Department of Statistics) Hiroaki Katayama (Department of Information Technology) Yuko Hirai (Department of Genetics) Yoichiro Kusunoki (Department of Radiobiology/Molecular Epidemiology) Kiyohiro Hamatani (Department of Radiobiology/Molecular Epidemiology) Saeko Fujiwara (Department of Clinical Studies) | 1 December 2008-30 November 2013 1 April 2009-31 March 2010 | ¥20,310,597 ¥8,875,726 ¥250,000 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|--|---------------------------------------|--|--|-----------------|
| Department of Clinical Studies, Hiroshima Ni-Hon-Sea Study (Prevalence and incidence of dementia) | Yamada M | Kasagi F (Department of Epidemiology) Fujiwara S | Suzuki G (Clinic, International University of Health and Welfare) Sasaki H (Hiroshima Atomic-bomb Casualty Council) Minori Y (Hiroshima International University) White L (Honolulu Aging Study) Larson E (Center for Health Studies at Group Health Cooperative, Seattle, USA) | 1992 |
| Ophthalmologic study in atomic-bomb survivors (Cataract study in the Adult Health Study [AHS]) | Minamoto A (Minamoto Eye Clinic) | Nakashima E (Department of Statistics) Neriishi K Hida A (Department of Clinical Studies, Nagasaki) Fujiwara S Akahoshi M (Department of Clinical Studies, Nagasaki) | Yokoyama T (Hiroshima University) Mishima H (Hiroshima General Hospital of West Japan Railway Company) Kitaoka T (Nagasaki University) | 2000 |
| A nested case-control study of breast and endometrial cancer in the cohort of Japanese atomic-bomb survivors | Neriishi K | Nakachi K (RERF Consultant and Project Principal Scientist) Cologne JB (Department of Statistics) Nakashima E (Department of Statistics) Grant EJ (Department of Epidemiology) Fujiwara S Akahoshi M (Department of Clinical Studies, Nagasaki) | Sharp GB (National Institute of Allergy and Infectious Diseases, USA) Eguchi H (Saitama Medical University) Izumi S (Oita University) Key TJ (Imperial Cancer Research Fund, UK) Stevens RG (University of Connecticut Health Center, USA) Land CE (U.S. National Cancer Institute) | 2002 |
| Ophthalmologic study of children of atomic-bomb survivors | Minamoto A (Minamoto Eye Clinic) | Nakashima E (Department of Statistics) Neriishi K Hida A (Department of Clinical Studies, Nagasaki) Fujiwara S Akahoshi M (Department of Clinical Studies, Nagasaki) | Yokoyama T (Hiroshima University) Mishima H (Hiroshima General Hospital of West Japan Railway Company) Kitaoka T (Nagasaki University) | 2002 |
| Assessment of osteoporosis at primary health care level | Kanis J (University of Sheffield, UK) | Fujiwara S | De Laet C (Erasmus University, Netherlands) Melton LJ III (Mayo Clinic, USA) | 2003 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|---|---------------------------------|--|--|-----------------|
| Department of Clinical Studies, Hiroshima A case-control study of atrophic gastritis and gastric cancer using frozen sera and genome DNA: Identification of new biomarkers for chronic gastritis associated with gastric cancer | Fujiiwara S | Cullings HM (Department of Statistics) Ohishi W Kasagi F (Department of Epidemiology) Hayashi T (Department of Radiobiology/ Molecular Epidemiology) Nakachi K (RERF Consultant and Project Principal Scientist) Akahoshi M (Department of Clinical Studies, Nagasaki) | Suzuki G (Clinic, International University of Health and Welfare) Tahara E (Hiroshima Cancer Seminar) | 2004 |
| Could genetic factors cause population bias among proximal A-bomb survivors?—A test of whether the same genetic factors are risk factors for high inflammatory status and myocardial infarction among A-bomb survivors 40–50 years later | Fujiiwara S | Ohishi W Yamada M Akahoshi M (Department of Clinical Studies, Nagasaki) Cologne JB (Department of Statistics) | Suzuki G (Clinic, International University of Health and Welfare) | 2005 |
| Glaucoma study in atomic-bomb survivors | Kiuchi Y (Hiroshima University) | Nakashima E (Department of Statistics) Neriishi K Hida A (Department of Clinical Studies, Nagasaki) Fujiiwara S Akahoshi M (Department of Clinical Studies, Nagasaki) | Yokoyama T (Hiroshima University) Uematsu M (Nagasaki University) Tsukui E (Nagasaki University) Kitaoaka T (Nagasaki University) | 2005 |
| Inflammation and cancer incidence in atomic-bomb survivors | Neriishi K | Hsu WL (Department of Statistics) Nakashima E (Department of Statistics) Tatsukawa Y Soda M (Department of Epidemiology, Nagasaki) Yamada M Fujiiwara S Cologne JB (Department of Statistics) Akahoshi M (Department of Clinical Studies, Nagasaki) | Little MP (Imperial College, UK) Nishi N (National Institute of Health and Nutrition) | 2005 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|---|---|---|---|-----------------|
| Department of Clinical Studies, Hiroshima Assessment of statistical methods for intermediate risk factors in non-cancer disease and mortality | William L (University of Washington, USA) | Hsu WL (Department of Statistics) Takahashi I Cologne JB (Department of Statistics) Fujiwara S Akahoshi M (Department of Clinical Studies, Nagasaki) Kodama K (Chief Scientist) | Kopecky KJ (University of Washington, Fred Hutchinson Cancer Research Center, USA) Davis S (University of Washington, Fred Hutchinson Cancer Research Center, USA) | 2006 |
| Risk factors and modifiers related to clustering of non-cancer disease in the AHS: Analysis using statistical data mining techniques | Kakuma T (Kurume University) | Cologne JB (Department of Statistics) Furukawa K (Department of Statistics) Hsu WL (Department of Statistics) Yamada M Kodama K (Chief Scientist) Suyama A (Department of Epidemiology, Nagasaki) Akahoshi M (Department of Clinical Studies, Nagasaki) Fujiwara S Ross NP (Department of Statistics) | Nakashima E (Department of Statistics) Furukawa K (Department of Statistics) Sakata R (Department of Epidemiology) Ross NP (Department of Statistics) Neriishi K Takahashi I Yamada M Fujiwara S | 2006 |
| BMI and mortality | Thun M (American Cancer Society) | Ohishi W Hida A (Department of Clinical Studies, Nagasaki) Shore RE (Vice Chairman and Chief of Research) | Kakuma T (Kurume University) Araki Y (Kurume University) | 2008 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|--|---|---|--|-----------------|
| Department of Clinical Studies, Hiroshima Investigation of storage conditions for cataract tissue of A-bomb survivors, and its collection and storage program | Neriishi K | Nakashima E (Department of Statistics) Ohishi W Fujiwara S Hida A (Department of Clinical Studies, Nagasaki) Akahoshi M (Department of Clinical Studies, Nagasaki) Hayashi T (Department of Radiobiology / Molecular Epidemiology) Ito R (Department of Radiobiology / Molecular Epidemiology) Nakachi K (RERF Consultant and Project Principal Scientist) | Blakely EA (Berkeley National Laboratory, USA) Chang P (SRI International, USA) Minamoto A (Minamoto Eye Clinic) Yokoyama T (Hiroshima University) Toda S (Toda Eye Clinic) Uematsu M (Nagasaki University) Tsukui E (Nagasaki University) Kiuchi Y (Hiroshima University) Kitaoka T (Nagasaki University) Shirai A (Shirai Ophthalmologic Clinic) Cucinotta FA (NASA Johnson Space Center, USA) Chylack LT (Harvard University, USA) | 2008 |
| Department of Clinical Studies, Nagasaki Relationship between Brugada-type electrocardiogram and prostate cancer | Haruta D (Nagasaki University) | Akahoshi M Hida A Sera N Imaizumi M Nakashima E (Department of Statistics) | Seto S (Nagasaki University) | 2007 |
| Cardiovascular disease and atomic-bomb radiation—From view point of risk factor clustering | Sera N | Akahoshi M Hida A Imaizumi M Nakashima E (Department of Statistics) | Seto S (Nagasaki University) | 2007 |
| Incidence and risk factors of fatty liver | Tsuneto A (Nagasaki University) | Nakashima E (Department of Statistics) Akahoshi M | 2008 | |
| The association between subclinical thyroid dysfunction and cardiovascular disease and mortality: Individual participant pooled analysis of large international cohort studies | Rodondi N (University of Lausanne, Switzerland) | Imaizumi M | Gusseldoo J (Leiden University Medical Center, Netherlands) | 2008 |
| Prognostic significance of VPCs in taking consideration of their origins | Haruta D (Nagasaki University) | Nakashima E (Department of Statistics) Fujiwara S (Department of Clinical Studies, Hiroshima) Akahoshi M | 2008 | |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|--|---|--|---|--|
| Department of Clinical Studies, Nagasaki The incidence and prognostic value of the early repolarization electrocardiogram pattern The association between chronic kidney disease and cardiovascular disease among atomic-bomb survivors | Haruta D (Nagasaki University) Tsuneto A (Nagasaki University) | Nakashima E (Department of Statistics) Akahoshi M Takahashi I (Department of Clinical Studies, Hiroshima) Hida A Sera N Imaizumi M Yanada M (Department of Clinical Studies, Hiroshima) Neriishi K (Department of Clinical Studies, Hiroshima) Ohishi W (Department of Clinical Studies, Hiroshima) Tatsukawa Y (Department of Clinical Studies, Hiroshima) Nakashima E (Department of Statistics) Hsu WL (Department of Statistics) Misumi M (Department of Statistics) Fujiwara S (Department of Clinical Studies, Hiroshima) Akahoshi M | Tsuneto A (Nagasaki University) | 2008 2009 |
| Department of Genetics Molecular alterations in early-onset breast and ovarian cancers among atomic-bomb survivors Mutation detection in rat oocytes | Mabuchi K (U.S. National Cancer Institute) Land CE (U.S. National Cancer Institute) Kamiguchi Y (Asahikawa Medical College) | Hirai Y Asakawa J | Rühm W (Munich University/ National Research Center for Environment and Health, Germany) Morisaki T (National Cardiovascular Center) | 2001 2003 2004 2005 |
| Measurement of thermal neutron dose in tooth enamel Pluralistic characterization for genome information about cardiovascular diseases such as hypertension, and development of epoch-making methods for either diagnosis or therapy | | | Hirai Y Nakamura N (Chief Scientist) Takahashi N | |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|--|---|---|---|-----------------|
| Department of Genetics | | | | |
| Evaluation of genetic effects of atomic-bomb radiation: A collaborative small-scale pilot study screening for mutations at microsatellites | Nakajima H (Osaka University) Ryo H (National Institute of Biomedical Innovation) Thuy LTT (Osaka University) | Kodaira M | Nomura T (Osaka University) | 2005 |
| ESR measurements of tooth samples from Nagasaki survivors | Tomonaga M (Nagasaki University) Iijima Y (Nagasaki University) Mine M (Nagasaki University) Okumura Y (Nagasaki University) | Hirai Y Nakamura N (Chief Scientist) | | 2005 |
| Evolution of cichlids by DNA 2-DE | Okada N (Tokyo Institute of Technology) | Assakawa J | | 2006 |
| ES cell targeting | Suemori H (Kyoto University) | Noda A | | 2007 |
| Cytogenetic test of the epithelial cells from mammary glands of rats exposed <i>in utero</i> | Shimada Y (National Institute of Radiological Sciences) | Kodama Y | | 2008 |
| Study of genetic effects of radiation using animal models | Shimada Y (National Institute of Radiological Sciences) | Asakawa J | | 2009 |
| Department of Radiobiology/Molecular Epidemiology | Shimizu K (Okayama University) | | | |
| Study on gene alterations and genetic susceptibility in sporadic lung carcinogenesis (SNP) | | | Nakachi K (RERF Consultant and Project Principal Scientist) Hayashi T Yoshida K Imai K | 2002 |
| Study on gene alterations and expression in sporadic lung carcinogenesis | Sueoka E (Saga University) Aragane N (Saga University) | | Nakachi K (RERF Consultant and Project Principal Scientist) Hayashi T Yoshida K Imai K | 2002 |
| Survey on frequencies of SNPs of various genes in a Japanese population | Yoshida T (National Cancer Center) | | Nakachi K (RERF Consultant and Project Principal Scientist) Kusunoki Y Hayashi T Yoshida K Imai K | 2002 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|---|---|---|---|-----------------|
| Department of Radiobiology/Molecular Epidemiology Study on genetic susceptibility to stomach cancer | Yasui W (Hiroshima University) | Hayashi T Nakachi K (RERF Consultant and Project Principal Scientist) Ito R Imai K | Nakachi K (RERF Consultant and Project Principal Scientist) Imai K | 2002 |
| Study on the role of hypoxia-responsive gene, <i>HIF1α</i> in radiation effects on cells | Tanimoto K (Hiroshima University) | Nakachi K (RERF Consultant and Project Principal Scientist) Imai K | Nakachi K (Department of Clinical Studies) Nakachi K (RERF Consultant and Project Principal Scientist) | 2002 |
| Collection of fresh thyroid cancer tissues (Hiroshima) | Hamataki K | Neriiishi K (RERF Consultant and Project Principal Scientist) | Takeichi N (Takeichi Clinic) | 2004 |
| Study on thyroid cancer among A-bomb survivors (Hiroshima) | Hamataki K | Taga M Ito R | Arihiro K (Hiroshima University) Hayashi Y (Asa Municipal Hospital) | 2002 |
| Study on the cytotoxicity of toxin-induced apoptosis in peripheral lymphocytes | Sugai M (Hiroshima University) Ohara M (Hiroshima University) | Kusunoki Y Hayashi T Nakachi K (RERF Consultant and Project Principal Scientist) | Kyoizumi S (Yasuda Women's University) | 2001 |
| Study on the role of gap junctions in apoptosis induced by anticancer drugs combined with radiation | Ogawa T (Hiroshima Prefectural Hospital) Hayashi T | Nakachi K (RERF Consultant and Project Principal Scientist) Yoshida K | Tokunou M (Tokunou Clinic) Ago R (Hiroshima University) Yorioka N (Hiroshima University) Chang CC (Michigan State University, USA) Trosko JE (Michigan State University, USA) | 1998 |
| Analyses of <i>TCR</i> and <i>HPRT</i> mutations in gene-targeted mice | Toyoshima M (Research Institute for Radiation Biology and Medicine, Hiroshima University) Xi Y (Research Institute for Radiation Biology and Medicine, Hiroshima University) | Kusunoki Y Nakachi K (RERF Consultant and Project Principal Scientist) | Kamiya K (Research Institute for Radiation Biology and Medicine, Hiroshima University) | 2004 |
| Study on the role of gene methylation in sporadic stomach carcinogenesis | Yuasa Y (Tokyo Medical and Dental University) | Imai K Nakachi K (RERF Consultant and Project Principal Scientist) | | 2003 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|---|--|---|--|-----------------|
| Department of Radiobiology/Molecular Epidemiology Molecular biological study on the genesis and development of sporadic breast cancer | Hayashi S (Tohoku University) | Nakachi K (RERF Consultant and Project Principal Scientist) Imai K Hayashi T | Eguchi H (Saitama Medical University) | 2002 |
| Study on the role of cell-to-cell communication in apoptosis of cancer cells | Hayashi T | | Ago R (Hiroshima University) Ogawa T (Hiroshima Prefectural Hospital) Yorioka N (Hiroshima University) | 2005 |
| Collection of cancer tissue specimens from A-bomb survivors | Kusunoki Y | Hamatanai K Taga M Ito R | Yasui W (Hiroshima University) | 2004 |
| Study on the role of parkinsonism-inducing substances on the development of parkinsonism | Ohta S (Hiroshima University) Kawasaki A (Hiroshima University) | Hayashi T | | 2006 |
| Study on the radiation effects on immunological aging and intracellular reactive oxygen species | Hayashi T | | Hayashi I (Hiroshima University) | 2006 |
| Study on lung, colorectal, and breast cancers developed among atomic-bomb survivors | Hamatanai K | Taga M Ito R Nakachi K (RERF Consultant and Project Principal Scientist) | Yasui W (Hiroshima University) Eguchi H (Saitama Medical University) | 2004 |
| Study on gastric cancer developed among atomic-bomb survivors | Yasui W (Hiroshima University) | Hamatanai K Taga M Ito R Nakachi K (RERF Consultant and Project Principal Scientist) | Kusunoki Y | 2006 |
| Study on the mechanisms of radiation-induced genetic instability using peripheral lymphocytes | Homma M (National Institute of Health Sciences) | | Ito R Nakachi K (RERF Consultant and Project Principal Scientist) | 2008 |
| Clinical- and molecular pathological analysis of sporadic gastric cancer | Yasui W (Hiroshima University) | | Nakachi K (RERF Consultant and Project Principal Scientist) | 2004 |
| Development of new statistical models for RERF case-studies | Izumi S (Oita University) | | Furukawa K (Department of Statistics) | 2006 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|---|---|--|--|-----------------|
| Department of Radiobiology/Molecular Epidemiology Studies on the relationships between immunological parameters and genetic backgrounds | Kusunoki Y | Hayashi T Nakachi K (RERF Consultant and Project Principal Scientist) | Kyoizumi S (Yasuda Women's University) | 2005 |
| Study on thyroid cancer among A-bomb survivors (Nagasaki) | Hamataki K | Soda M (Department of Epidemiology, Nagasaki) | Nakashima M (Nagasaki University) Sekine I (Nagasaki University), et al. | 2005 |
| Role of inflammatory cytokines in sporadic stomach cancer | Suganuma M (Saitama Cancer Center) | Imai K Hayashi T Nakachi K (RERF Consultant and Project Principal Scientist) | | 2006 |
| Study on molecular epidemiological characteristics of lung cancer development among A-bomb survivors | Nakachi K (RERF Consultant and Project Principal Scientist) | Hamatani K Taga M Ito R | Harris C C (U.S. National Cancer Institute) Yasui W (Hiroshima University) Tahara E (Hiroshima Cancer Seminar) | 2004 |
| Genetic susceptibility to cancer in multiethnic cohort | Henderson BE (University of Southern California, USA) | Nakachi K (RERF Consultant and Project Principal Scientist) Imai K Hayashi T | | 2005 |
| A collaboration study on cardiovascular disease between cohort studies throughout the Asian-Pacific region | Asian Pacific Cohort Studies Collaboration (The George Institute for International Health, Australia) | Nakachi K (RERF Consultant and Project Principal Scientist) Imai K | | 1996 |
| Inflammation and innate immunity genes and colorectal cancer | Marchand LL (Cancer Research Center of Hawaii, USA) | Nakachi K (RERF Consultant and Project Principal Scientist) Hayashi T Kusunoki Y Imai K | | 2006 |
| Cytogenetic and molecular epidemiological differences in breast cancer between German and Japanese patients | Brandt B (University of Munster, Germany) | Nakachi K (RERF Consultant and Project Principal Scientist) Imai K | Trosko JE (Michigan State University, USA) | 1998 |
| Stem cell biology with special reference to radiation and drug effects | Hayashi T | Nakachi K (RERF Consultant and Project Principal Scientist) | Chang CC (Michigan State University, USA) Hayashi I (Hiroshima University) | 2002 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|--|--|--|---|-----------------|
| Department of Radiobiology/Molecular Epidemiology Assessment of statistical methods for genome data analysis | Imai K Takeichi N (Takeichi Clinic) | Nakachi K (RERF Consultant and Project Principal Scientist) Cologne JB (Department of Statistics) | Victor A (University of Mainz, Germany) | 2006 |
| Molecular analysis of thyroid tumors | | Nakachi K Hamatani K Nakachi K (RERF Consultant and Project Principal Scientist) | | 2008 |
| Department of Epidemiology, Hiroshima Health effects of radiation workers at nuclear facilities in Japan | Tatsumi K (Radiation Effects Association) | Shimizu Y (Part-time Professional) | Nishi N (National Institute of Health and Nutrition) Akiba S (Kagoshima University) Yoshimura T (Fukuoka Institute of Health and Environmental Sciences) Sobue T (National Cancer Center) Yoshimoto Y (National Institute of Radiological Sciences) | 1995 |
| Comparison of liver cancer risks between Thorotrast-admitted patients and A-bomb survivors in Japan | Mori T (National Institute of Radiological Sciences) | Shimizu Y (Part-time Professional) Cologne JB (Department of Statistics) Cullings HM (Department of Statistics) Tokuoka S (RERF Consultant) | | 2001 |
| Task group of epidemiology on radiological protection standard | Akiba S (Kagoshima University) | Kasagi F | Yoshinaga S (National Institute of Radiological Sciences) Mizuno S (National Institute of Health and Nutrition) Sasagawa S (Institute for Environmental Sciences) Iwasaki T (Central Research Institute of Electric Power Industry) | 2005 |
| Relationship between radiation exposure and risk of second primary cancers among A-bomb survivors | Li CI (University of Washington, USA) | Sugiyama H Soda M (Department of Epidemiology, Nagasaki) Sakata R Hayashi M Kasagi F Suyama A (Department of Epidemiology, Nagasaki) | Nishi N (National Institute of Health and Nutrition) Mabushii K (U.S. National Cancer Institute) Davis S (University of Washington, USA) Kopecky KJ (University of Washington, USA) | 2006 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|---|---|--|---|-----------------|
| Department of Epidemiology, Hiroshima Second cancer risk after radiation therapy among A-bomb survivors | Yoshinaga S (National Institute of Radiological Sciences) | Kasagi F Soda M (Department of Epidemiology, Nagasaki) Moriwaki H Hsu WL (Department of Statistics) Hida A (Department of Clinical Studies, Nagasaki) Yamada M (Department of Clinical Studies) Katayama H (Department of Information Technology) Fujiwara S (Department of Clinical Studies) Akahoshi M (Department of Clinical Studies, Nagasaki) Suyama A (Department of Epidemiology, Nagasaki) | Nishi N (National Institute of Health and Nutrition) Akahane K (National Institute of Radiological Sciences) Doi K (National Institute of Radiological Sciences) Shimada Y (National Institute of Radiological Sciences) | 2007 |
| Health effect of smoking and ex-smoking in Japan | Darby S (University of Oxford, UK) | Sakata R Grant EJ Sugiyama H Soda M (Department of Epidemiology, Nagasaki) Shimizu Y (Part-time Professional) Tatsukawa Y (Department of Clinical Studies) Yamada M (Department of Clinical Studies) Moriwaki H Kasaagi F Suyama A (Department of Epidemiology, Nagasaki) Geyer S (Department of Statistics) Kodama K (Chief Scientist) | McGale P (University of Oxford, UK) Nishi N (National Institute of Health and Nutrition) Boreham J (University of Oxford, UK) Peto R (University of Oxford, UK) | 2007 |
| Research on symptoms unexpectedly emerging with influenza illness | Hirota Y (Osaka City University) | Ozasa K | | 2007 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|--|---|--|--|-----------------|
| Department of Epidemiology, Hiroshima Confounding or interaction of anthropometric factors with radiation on colon cancer incidence in the Life Span Study (LSS) | Semmens E (University of Washington, USA) | Grant EJ Sugiyama H Moriwaki H Sakata R Soda M (Department of Epidemiology, Nagasaki) Kasagi F Yamada M (Department of Clinical Studies) Fujiwara S (Department of Clinical Studies) Akahoshi M (Department of Clinical Studies, Nagasaki) Kodama K (Chief Scientist) | Nishi N (National Institute of Health and Nutrition) Li CI (University of Washington, USA) Davis S (University of Washington, USA) Kopecky KJ (University of Washington, USA) Mabuchi K (U.S. National Cancer Institute) | 2008 |
| Esophageal and gastric cancers: Patterns and predictors of risk in Hiroshima and Nagasaki, Japan | Kennedy BS (Georgetown University, USA) | Grant EJ Kasagi F Suyama A (Department of Epidemiology, Nagasaki) Shimizu Y (Part-time Professional) Sugiyama H Soda M (Department of Epidemiology, Nagasaki) Sakata R Ross NP (Department of Statistics) Cologne JB (Department of Statistics) Cullings HM (Department of Statistics) Yamada M (Department of Clinical Studies) | Mabuchi K (U.S. National Cancer Institute) Chow WH (U.S. National Cancer Institute) Nishi N (National Institute of Health and Nutrition) | 2008 |
| Timing of menarche and first birth in relation to risk of breast cancer in A-bomb survivors | McDougall J (University of Washington, USA) | Grant EJ Sakata R Sugiyama H Soda M (Department of Epidemiology, Nagasaki) Shimizu Y (Part-time Professional) Tatsukawa Y (Department of Clinical Studies) Kasagi F Suyama A (Department of Epidemiology, Nagasaki) Ross NP (Department of Statistics) | Davis S (University of Washington, USA) Nishi N (National Institute of Health and Nutrition) Kopecky KJ (University of Washington, USA) Li CI (University of Washington, USA) | 2008 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|---|--|---|--|-----------------|
| Department of Epidemiology, Hiroshima Relationship between radiation exposure and kidney disease among A-bomb survivors | Adams MJ (University of Rochester, USA) | Grant EJ Kodama K (Chief Scientist) Shimizu Y (Part-time Professional) Kasagi F Suyama A (Department of Epidemiology, Nagasaki) Sakata R Fujiwara S (Department of Clinical Studies) Akahoshi M (Department of Clinical Studies, Nagasaki) | | 2008 |
| Second collaborative analysis of radiation-associated thyroid cancers | Sakata R | Shore RE (Vice Chairman and Chief of Research) | Ron E (U.S. National Cancer Institute) Veiga L (U.S. National Cancer Institute) Lubin J (U.S. National Cancer Institute) | 2008 |
| Department of Epidemiology, Nagasaki Relationship between radiation exposure and risk of second primary cancers among A-bomb survivors | Li CI (University of Washington, USA) | Suyama A Soda M | | 2006 |
| Histopathological identification of multiple primary cancers occurring in Nagasaki atomic-bomb survivors | Nakashima M (Nagasaki University) | Suyama A Soda M | | 2007 |
| Detection of leukemia and related disorders | Tomonaga M (Nagasaki Red Cross Atomic Bomb Hospital) | Hsu WL (Department of Statistics) Suyama A Soda M | Iwanaga M (Kwassui Woman's College) Preston DL (HiroSoft International Corporation, USA) | 1960 |
| Relationship between radiotherapy facilities and breast cancer survival: Database linkage study in Nagasaki | Ono Y (Osaka University) | Suyama A Soda M | | 2008 |
| Medical service area for cancer patients in Nagasaki | Ono Y (Osaka University) | Suyama A Soda M | | 2008 |
| The concentration of treatment facilities for childhood cancer from the viewpoint of Pareto curve and the number of patients treated per hospital in Nagasaki | Ono Y (Osaka University) | Suyama A Soda M | | 2008 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|---|---|---|---|-----------------|
| Department of Statistics Joint analysis of chromosomal aberrations, early effects of radiation, and late effects of radiation in the atomic-bomb survivors' data. | Stram D (University of Southern California, USA) | Cologne JB Cullings HM Furukawa K Misumi M | | 2007 |
| Estimating lifetime risk and loss of life with competing radiation-related causes of death | Vaeth M (University of Aarhus, Denmark) | Cologne JB | | 2006 |
| Design and power of epidemiologic studies and analyses conducted by sampling from a cohort | Cologne JB | Cullings HM | Izumi S (Oita University) Fujii Y (Miyazaki University) Langholz B (University of Southern California, USA) | 2002 |
| Mechanistic modeling of cancer risk | Dekkers F (National Institute for Public Health and Environment, the Netherlands) Bijwaard H (National Institute for Public Health and Environment, the Netherlands) | Hsu WL | | 2007 |
| Mechanistic modeling of cancer risk | Kaiser JC (National Research Center for Environment and Health, Germany) | Cullings HM | | 2008 |
| Molecular research (DNA methylation, etc.) on gastrointestinal cancers | Matsubara N (Okayama University) | Cullings HM | | 2004 |
| Comparison of liver cancer risks between Thorotrast-admitted patients and Abomb survivors in Japan | Mori T (National Institute of Radiological Sciences) | Cullings HM Cologne JB Shimizu Y (Part-time Professional, Department of Epidemiology) | | 2005 |
| Causal modeling for radiation, hypertension, and CVD mortality | Kopecky KJ (University of Washington, USA) | Hsu WL | Williams L (University of Washington, USA) | 2006 |
| Development of instrumental variables-based methods for evaluating errors in radiation dose and adjusting risk estimates | Carter R (The State University of New York at Buffalo, USA) | Cullings HM Cologne JB | | 2007 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|--|--|---|---|-----------------|
| Department of Statistics Risk assessment of cancer incidence in persons exposed <i>in utero</i> or as young children | Preston DL (HiroSoft International Corporation, USA) | Cullings HM Kodama K (Chief Scientist) Suyama A (Department of Epidemiology, Nagasaki) Soda M (Department of Epidemiology, Nagasaki) Shore RE (Vice Chairman and Chief of Research) | | 2007 |
| Specialized Monte Carlo calculations to convert tooth enamel ESR measurements to shielded kerma and organ doses | Nakamura N (Chief Scientist) Egbert S (Science Applications International Corporation, USA) | Cullings HM | | |
| Update of RERF tooth ESR measurement data using spectral deconvolution and new methods and information | Nakamura N (Chief Scientist) Egbert S (Science Applications International Corporation, USA) | Cullings HM | | 2007 |
| Bayesian approach to risk assessment using individual data | Little MP (Imperial College, UK) | Cullings HM Furukawa K, et al. | | 2007 |
| Geospatial-temporal approaches to risk assessment | Patil GP (The Pennsylvania State University, USA) | Cullings HM Furukawa K, et al. | Lawson A (University of South Carolina, USA) Jacques G (Biomedware, Inc., USA) | 2007 |
| Functional methods for radiation exposure and biomarker data | Wang CY (Fred Hutchinson Cancer Research Center, USA) | Cullings HM | | 2007 |
| Leukemia, lymphoma, and multiple myeloma incidence in the LSS cohort: 1950–2001 | Preston DL (HiroSoft International Corporation, USA) | Hsu WL Soda M (Department of Epidemiology, Nagasaki) Suyama A (Department of Epidemiology, Nagasaki) Kasagi F (Department of Epidemiology) Funamoto S | | 2004 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|---|--|---|--|-----------------|
| Department of Statistics Application of causal modeling on radiation, inflammation, and selected radiation/inflammation-induced health outcomes | Kakuma T (Kurume University) | Hsu WL Nakashima E Furukawa K Sakata R (Department of Epidemiology) Neriishi K (Department of Clinical Studies) Takahashi I (Department of Clinical Studies) Yamada M (Department of Clinical Studies) Fujiwara S (Department of Clinical Studies) Sugiyama H (Department of Epidemiology) Kasagi F (Department of Epidemiology) | | 2007 |
| Thermoluminescent dosimetry of gamma dose to tiles and bricks | Maruyama T (National Institute of Radiological Sciences) | Cullings HM | | 1999 |
| Prevalence of hyperthyroidism in the cohort study of thyroid cancer and other thyroid diseases after the Chernobyl accident | Hatch M (U.S. National Cancer Institute) | Furukawa K | | 2009 |
| Cancer mortality following radioiodine treatment for adult hyperthyroidism in the U.S. | Ron E (U.S. National Cancer Institute) | Furukawa K | | 2009 |
| Interaction effects of radiation and smoking on lung cancer risks among atomic-bomb survivors | Preston DL (HiroSoft International Corporation, USA) | Furukawa K Funamoto S Tokuoka S (RERF Consultant), et al. | | 2006 |
| Thyroid tumor incidence among the RERF LSS cohort | Mabuchi K (U.S. National Cancer Institute) | Furukawa K Funamoto S Sakata R (Department of Epidemiology) Tokuoka S (RERF Consultant), et al. | | 2009 |
| Study of arteriosclerosis in AHS population (Part 1. Physiological indices of arteriosclerosis) | Fujiwara S (Department of Clinical Studies) | Takahashi I (Department of Clinical Studies) Yamada M (Department of Clinical Studies, Nagasaki) Akahoshi M (Department of Clinical Studies, Nagasaki) Hsu WL Misumi M | Takahashi T (Hiroshima University Hospital) Kihara Y (Hiroshima University Hospital) Matsumoto M (Hiroshima University Hospital) | 2009 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|---|---|--|--|-----------------|
| Department of Statistics A semi-parametric survival extrapolation method: Model validation using RERF cohort | Fang CT (Taiwan University) Hsu WL Furukawa K Cullings HM Kasagi F (Department of Epidemiology) Soda M (Department of Epidemiology, Nagasaki) Suyama A (Department of Epidemiology, Nagasaki) Ozasa K (Department of Epidemiology) | Hsu WL Furukawa K Cullings HM Kasagi F (Department of Epidemiology) Soda M (Department of Epidemiology, Nagasaki) Suyama A (Department of Epidemiology, Nagasaki) Ozasa K (Department of Epidemiology) | Wang JD (College of Public Health, Taiwan University) Hwang JS (Academia Sinica, Taiwan) | 2009 |
| Application of causal modeling on radiation, inflammation, and cataract surgery among AHS population | Kakuma T (Kurume University) Hsu WL | Nakashima E Neriishi K (Department of Clinical Studies) | Araki Y (Kurume University) | 2009 |
| Cohort study on weight fluctuation and cancer and cardiovascular disease incidence and mortality | Nari A (Research Institute, International Medical Center of Japan) Mizoue T (Research Institute, International Medical Center of Japan) | Akahoshi M (Department of Clinical Studies, Nagasaki) Soda M (Department of Epidemiology, Nagasaki) Cologne JB | Araki Y (Kurume University) | 2009 |
| Methods for assessing joint effects of radiation and intermediate risk factors in nested case control studies | Cologne JB | Furukawa K Hsu WL Grant EJ (Department of Epidemiology) Ohishi W (Department of Clinical Studies) Neriishi K (Department of Clinical Studies) Fujiwara S (Department of Clinical Studies) Nakachi K (RERF Consultant and Project Principal Scientist) Cullings HM | Langholz B (University of Southern California, USA) Fujii Y (Miyazaki University) Izumi S (Oita University) Kopecky KJ (University of Washington, USA) | 2008 |
| Consult and collaborate in clinical and molecular genetic research; provide lectures on biostatistics related to public health and risk assessment, clinical research, and genomic research | Shimizu K (Okayama University) | Cologne JB | | 2009 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|--|--|---|---|------------------|
| Department of Statistics A nested case-control study of breast cancer and endometrial cancer in the cohort of Japanese atomic-bomb survivors | Neriishi K (Department of Clinical Studies) | Cologne JB Grant EJ (Department of Epidemiology) Nakachi K (RERF Consultant and Project Principal Scientist), et al. | Berrington A (U.S. National Cancer Institute) Sharp GB (U.S. National Institute of Allergy and Infectious Diseases) Stevens RG (University of Connecticut Health Center, USA) | 2002 |
| Study on estimability of waist circumference and its application to risk analysis for metabolic syndrome | Nakamura T (Nagasaki University) | Soda M (Department of Epidemiology, Nagasaki) Akahoshi M (Department of Clinical Studies, Nagasaki) Cullings HM Nakashima E Misumi M Ichimaru S (Department of Clinical Studies, Nagasaki) | Ishida N (Preventive Clinical Lab. Co., Ltd.) | 2008 |
| Cancer risk estimation after acute radiation exposure: Impacts of the neutron dose and non-parametric analysis of risk coefficients | Kaiser JC (National Research Center for Environment and Health, Germany) | Cullings HM | Jacob P (National Research Center for Environment and Health, Germany) Rüthm W (Munich University/National Research Center for Environment and Health, Germany) Walsh L (Federal Office of Radiation Protection, Germany) | 2008 |
| Cancer risk estimation after acute radiation exposure: Impacts of radiobiological effects on the risk estimate | Kaiser JC (National Research Center for Environment and Health, Germany) | Cullings HM | Eidemüller M (National Research Center for Environment and Health, Germany) Jacob P (National Research Center for Environment and Health, Germany) | 2008 |
| Department of Information Technology Collaborative studies for the construction of databases and development of dictionary system for human genome analyses Technical cooperation for the regional cancer registration system | Slezak T (Lawrence Livermore National Laboratory, USA) Tsukuma H (Osaka Medical Center for Cancer and Cardiovascular Disease) | Katayama H Katayama H | | 1996 2005 |

FY2009 Collaborative Studies (Without External Funds)

| Title of Research | Name of Chief of Research Group | Investigator(s) at RERF | Investigator(s) outside RERF | Initiation Year |
|---|---|-------------------------|------------------------------|-----------------|
| Department of Information Technology Research for health effects and dosimetry in Semipalatinsk nuclear test site | Hoshi M (Research Institute for Radiation Biology and Medicine, Hiroshima University) | Katayama H | | 2005 |
| Measures for radiation emergency of nuclear power plants | Kamiya K (Radiation Emergency Medicine Promotion Center, Hiroshima University) | Katayama H | | 2005 |

International Collaborative Activities

Participation in International Collaborative Activities by RERF Directors and Staff Members (excluding participation in international scientific meetings)

1. Collaborative activities to provide A-bomb survivors in North America with health examinations

This project has been performed biennially since 1977. The project was incorporated into the national government's overseas A-bomb survivor support project starting with the previous cycle in fiscal 2007, and was then entrusted to the Hiroshima prefectural government and subsequently to the Hiroshima Prefecture Medical Association. In the 17th cycle of the project, conducted in fiscal 2009, the 1st team visited Los Angeles and Honolulu on September 16–30, 2009, and the 2nd team San Francisco and Seattle on October 7–21, 2009, each of which was joined by one physician and one administrative staff member from RERF. The 1st team included Dr. Waka Ohishi, Chief, Division of Clinical Laboratories, Department of Clinical Studies, Hiroshima, and Mr. Takashi Oda, Assistant Group Leader, Master File Section, Department of Epidemiology, Hiroshima; and the 2nd team Dr. Kotaro Ozasa, Chief, and Mr. Tadaaki Watanabe, Administrative Assistant Chief, Department of Epidemiology, Hiroshima.

2. Collaborative activities to provide A-bomb survivors in South Korea with health counseling

This project was commenced in fiscal 2004 by the governments of Nagasaki prefecture and Nagasaki city as part of the national government's overseas A-bomb survivor support project with the aim of providing A-bomb survivors in South Korea with health counseling and guidance. In fiscal 2009, the 9th and 10th cycles were implemented with the dispatch of medical teams to South Korea. Dr. Masazumi Akahoshi, Chief, Department of Clinical Studies, Nagasaki, joined the medical teams to provide health counseling and guidance to A-bomb survivors in Hapcheon-gun and Pusan, respectively, on September 6–11, 2009, and January 31–February 6, 2010.

3. Other collaborative activities related to overseas A-bomb survivors

Dr. Hiroaki Katayama, Chief, Information Technology Department (ITD), and Dr. Yoshimi Tatsukawa, Research Scientist at the Department of Clinical Studies, Hiroshima, conducted a living-environment survey of overseas A-bomb survivors in Seattle, U.S., and Vancouver, Canada, on November 1–6, 2009.

4. Semipalatinsk-related collaborative activities

With the aim of participating in preliminary meetings and collecting information involving collaborative research with Hiroshima University's Research Institute for Radiation Biology and Medicine, Dr. Hiroaki Katayama, Chief, ITD, visited on two separate occasions the Kazakhstan Scientific Research Institute of Radiation Medicine and Ecology in Semipalatinsk on August 28–September 2, 2009, and March 12–16, 2010.

With support from the Radiation Effects Association, Dr. Toshiteru Okubo, Chairman, attended a research committee meeting on Semipalatinsk health effects held on March 12, 2010, in Tokyo.

5. Collaborative activities related to International Atomic Energy Agency (IAEA)

Dr. Toshiteru Okubo, Chairman, visited the IAEA head office on October 22, 2009, in Vienna, Austria, delivering a lecture to managerial staff and radiobiology specialists.

Dr. Yoshiaki Kodama, Acting Chief, Department of Genetics, attended a conference for review of a draft manual for application of biodosimetry in the event of a radiation emergency, held at the IAEA head office on November 1–8, 2009, in Vienna, Austria.

6. International Commission on Radiological Protection (ICRP)

Dr. Roy E. Shore, Vice Chairman and Chief of Research, attended an ICRP-DDREF (dose and dose rate effectiveness factor) meeting, held on July 16, 2009, in Bethesda, Maryland, U.S.

With support from the Radiation Effects Association, Dr. Nori Nakamura, Chief Scientist, attended an ICRP Committee 1 meeting, held on November 8–12, 2009, in Porto, Portugal.

7. United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR)

Dr. Kazunori Kodama, Chief Scientist, attended as a guest lecturer an open symposium tilted "Latest trends at UNSCEAR and outlook for radiation protection research," held on January 29, 2010, in Tokyo.

With support from the Radiation Effects Association, Dr. Kazunori Kodama, Chief Scientist, attended an UNSCEAR Japanese committee meeting held on March 1, 2010, in Tokyo.

8. Other international collaborative activities

Dr. Roy E. Shore, Vice Chairman and Chief of Research, and Dr. Kazunori Kodama, Chief Scientist, attended the 5th Asian Regional Conference on the evolution of the system of radiobiology protection, held at the National Institute of Radiological Sciences (NIRS) in Chiba on September 3, 2009.

Acceptance of Visitors from Overseas for Briefing and Training

(Total in FY2009: 165 persons, excluding general visitors)

Hiroshima: 148 persons

Visitors related to Hiroshima International Council for Health Care of the Radiation-exposed (HICARE) (14 persons)

1) South Korea-related (12 persons)

A group of four members visited RERF on July 16, 2009, for short-term training on medical care for A-bomb survivors residing in South Korea. A training group of eight members for medical care of the radiation-exposed came on

October 29, 2009.

2) Others (2 persons)

One physician from Internal Secretion Hospital, Brest, Belarus, visited RERF on May 26, 2009. One physician (intern) from the School of Medicine, Health Sciences University of Mongolia, came on July 24, 2009.

Visitors related to Japan International Cooperation Agency (JICA) (34 persons)

1) Research Institute of Tuberculosis, Japan Anti-Tuberculosis Association

Sixteen trainees from Afghanistan, Cambodia, Congo, Haiti, Lesotho, Malawi, Myanmar, Papua New Guinea, the Philippines, South Africa, Zambia, Zimbabwe, and Indonesia visited RERF for the "FY2009 'Stop Tuberculosis!' Training Course" on July 8, 2009.

Eight trainees from Bangladesh, Cambodia, China, Ethiopia, Mongolia, the Philippines, and Indonesia came for the FY2009 JICA group training course on tuberculosis examination for expansion of directly observed treatment, short-course (DOTS) on November 4, 2009.

2) National Cancer Center

Seven trainees from Albania, Argentina, Sri Lanka, and Uruguay visited RERF for the FY2009 JICA group training course on the latest cancer treatments and diagnostics on October 30, 2009.

3) National Cardiovascular Center

Three trainees from Albania, Argentina, and Iraq visited RERF for the FY2009 JICA group training course on cardiovascular disease countermeasures on November 6, 2009.

Visitors related to HICARE recommended by RERF (2 persons)

One graduate student from the Medical Radiological Research Center of the Russian Academy of Medical Sciences, Russia, and one research scientist from Riga Stradiņš University, Latvia, visited RERF for training at the Immunology Laboratory, Department of Radiobiology/Molecular Epidemiology during the period September 7–November 6, 2009.

Visitors related to RERF training program (3 persons)

Two students from the Department of Epidemiology, School of Public Health and Community Medicine, University of Washington, U.S., visited RERF for training at the Department of Epidemiology during September 12–18, 2009. One research scientist from the National Cancer Center, South Korea, came for training at the Immunology Laboratory, Department of Radiobiology/Molecular Epidemiology during November 16–December 18, 2009.

Visitors related to the Ministry of Education, Culture, Sports, Science and Technology (MEXT) (8 persons)

Eight trainees from Vietnam, Mongolia, Kyrgyzstan,

Uzbekistan, Cambodia, Thailand, and Laos visited RERF on November 16, 2009, for the "FY2009 Young Leaders' Program" as a medical administration course organized by the Nagoya University Graduate School of Medical Sciences.

Others (87 persons)

A clinical and research fellow/administrator and one other person from the Retinal Evaluation Laboratory, Center for Eye Research Australia, University of Melbourne, Australia, visited RERF on April 14, 2009. A student from Faculty of Medicine, University of Ljubljana, Slovenia, came on June 25, 2009. Twenty-eight physicians from China, India, and Pakistan, among participants in the International Physicians for the Prevention of Nuclear War (IPPNW) North and South Asia Joint Regional Conference, held at the International Conference Center in Hiroshima, visited RERF on August 22, 2009. Four reporters from Germany, Italy, Poland, and Portugal, invited under the European Reporter Fellowship Program (reporter exchange program between Japan Newspaper Publishers and Editors Association and European Journalism Centre), visited RERF's Hiroshima Laboratory on October 6, 2009. Twenty-eight students and three instructors from the Faculty of Medicine, University of Twente, the Netherlands, were provided with a lecture on A-bomb radiation health effects by an RERF Chief Scientist at the Hiroshima Peace Memorial Museum on November 23, 2009. Seven physicians from the Society for CW Victims Support, Iran, visited RERF on November 26, 2009. A director and 10 other persons from Taean Health Center and County Hospital, South Korea, visited RERF on January 21, 2010. A chief of Operation Development from Providence Little Company of Mary Medical Center, U.S., came on January 29, 2010. One physician each from Santa Cruz Hospital and Nippo-Brazil Benefits Hospital, Brazil, visited RERF on February 19, 2010.

Nagasaki: 17 persons

Visitors related to Nagasaki Association for Hibakushas' Medical Care (NASHIM) (6 persons)

1) Kazakhstan-related (5 persons)

Five physicians from Kazakhstan visited Nagasaki RERF on July 30, 2009.

2) FY2009 NASIM Summer Program (1 person)

One senior researcher from the Scientific Center for Radiation Medicine, Academy of Medical Sciences of Ukraine, visited RERF for the FY2009 NASHIM summer program for epidemiological research on August 11, 2009.

Visitors related to JICA (6 persons)

Six trainees from Cambodia, Kenya, Uganda, and the Dominican Republic visited Nagasaki RERF on February 19, 2010, for the JICA group training course for medical technicians.

Visitors related to World Health Organization (WHO) (2 persons)

A scientist from the WHO Radiation and Environmental Health Team, Argentina, visited RERF's Nagasaki Laboratory on June 12, 2009. A scientist from the Bremen Institute for Prevention Research and Social Medicine, University of Bremen, Germany (responsible person for development of safety guidelines under the WHO International Radon Project), visited Nagasaki Laboratory on March 3, 2010.

Others (3 persons)

One physician from Switzerland visited Nagasaki RERF on May 12, 2009. A writer and a researcher from the U.S. visited the Nagasaki Laboratory on May 14, 2009.

List of Long-term Trainees (1 month or more)**September 7–November 6, 2009**

Liga Larmane, research scientist at Riga Stradins University, Latvia

Oleg Kovalev, graduate student at Medical Radiological Research Center of the Russian Academy of Medical Sciences, Russia

Training on study of effects of radiation exposure on immune function, especially using methods to measure intracellular reactive oxygen species levels and to examine genomic instability, at the Immunology Laboratory, Department of Radiobiology/Molecular Epidemiology

November 16–December 18, 2009

Se Byeong Lee, research scientist at the National Cancer Center, South Korea

Training on study of mechanisms of cell death induction by radiation and anti-cancer drugs with normal cells and tumor cell lines, and study on effects of radiation exposure on immune function at the Immunology Laboratory, Department of Radiobiology/Molecular Epidemiology