

## 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

- ◆ Adams MJ, Shore RE, Dozier A, Lipshultz SE, Schwartz RG, Constine LS, Pearson TA, Stovall M, Thevenet-Morrison K, Fisher SG: Thyroid cancer risk 40+ years after irradiation for an enlarged thymus: An update of the Hempelmann cohort. *Radiation Research* 2010 (December); 174(6):753–62.
- ◆ Boice JD, Hendry JH, Nakamura N, Niwa O, Nakamura S, Yoshida K: Meeting report: Low-dose-rate epidemiology of high background radiation areas. *Radiation Research* 2010 (June); 173(6):849–54.
- ◆ Duple EB: From out of the ruins. *Disaster Medicine and Public Health Preparedness* 2011 (March); 5(Suppl 1):S7.
- ◆ Duple EB, Mabuchi K, Cullings HM, Preston DL, Kodama K, Shimizu Y, Fujiwara S, Shore RE: Long-term radiation-related health effects in a unique human population: Lessons learned from the atomic bomb survivors of Hiroshima and Nagasaki. *Disaster Medicine and Public Health Preparedness* 2011 (March); 5(Suppl 1):S122–33.
- ◆ 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]* 2010 (April); 63(4):218–21. (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]* 2010 (April); 63(4):206–9. (Proceedings of the 50th Late A-bomb Effects Research Meeting, 2009) (Japanese)
- ◆ Okubo T (ed): MHLW Grant: FY2009 Report of Atomic Bomb Disease Research Project. 2010 (September), 89 p. (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: <sup>41</sup>Ca in tooth enamel. Part II: A means for retrospective biological neutron dosimetry in atomic bomb survivors. *Radiation Research* 2010 (August); 174(2):146–54. (RR 13-09)
- ◆ Walchuk M, Roessler G (interviewees: Duple EB, Cullings HM): 65 years of radiation effects research. *Health Physics News* 2010 (August); 38(8):1–9.
- ◆ Wallner A, Rühm W, Rugel G, Nakamura N, Arazi A, Faestermann T, Knie K, Maier HJ, Korschinek G: <sup>41</sup>Ca in tooth enamel. Part I: A biological signature of neutron exposure in atomic bomb survivors. *Radiation Research* 2010 (August); 174(2):137–45. (RR 1-07)
- ◆ WECARE Study Collaborative Group (RERF: Shore RE): Radiation exposure, the *ATM* gene, and contralateral breast cancer in the women's environmental cancer and radiation epidemiology study. *Journal of the National Cancer Institute* 2010 (April); 102(7):475–83.

### Clinical Studies, Hiroshima

- ◆ Abe H, Ochi H, Maekawa T, Hayes CN, Tsuge M, Miki D, Mitsui F, Hiraga N, Imamura M, Takahashi S, Ohishi W, Arihiro K, Kubo M, Nakamura Y, Chayama K: Hepatitis Common variation of *IL28* affects gamma-GTP levels and inflammation of the liver in chronically infected hepatitis C virus patients. *Journal of Hepatology* 2010 (September); 53(3):439–43.
- ◆ Kitamura S, Tsuge M, Hatakeyama T, Abe H, Imamura M, Mori N, Saneto H, Kawaoka T, Mitsui F, Hiraga N, Takaki S, Kawakami Y, Aikata H, Takahashi S, Ohishi W, Ochi H, Hayes CN, Chayama K: Amino acid substitutions in core and NS5A regions of the HCV genome can predict virological decrease with pegylated interferon plus ribavirin therapy. *Antiviral Therapy* 2010; 15(8):1087–97.
- ◆ Suzuki G, Yamaguchi I, Ogata H, Sugiyama H, Yonehara H, Kasagi F, Fujiwara S, Tatsukawa Y, Mori I, Kimura S: A nation-wide survey on indoor radon from 2007 to 2010 in Japan. *Journal of Radiation Research* 2010; 51(6):683–9.
- ◆ Takahashi I, Matsumoto M: Arteriosclerosis: Cytokines related to aortic calcification. *Domyakukoka Yobo [Prevention of Arteriosclerosis]* 2010 (October); 9(3): 113–4. (Japanese)
- ◆ Yatsuya H, Toyoshima H, Yamagishi K, Tamakoshi K, Taguri M, Harada A, Ohashi Y, Kita Y, Naito Y, Yamada M, Tanabe N, Iso H, Ueshima H; Japan Arteriosclerosis Longitudinal Study (JALS) Group: Body mass index and risk of stroke and myocardial infarction in a relatively lean population: meta-analysis of 16 Japanese cohorts using individual data. *Circulation* 2010 (September); 3(5):498–505.

### Manuscripts in Press

- ⌘ Hashimoto Y, Ochi H, Abe H, Hayashida Y, Tsuge M, Mitsui F, Hiraga N, Imamura M, Takahashi S, Nelson Hayes C, Ohishi W, Kubo M, Tsunoda T, Kamatani N, Nakamura Y, Chayama K: Prediction of response to peginterferon- $\alpha$ -2b plus ribavirin therapy in Japanese patients infected with hepatitis C virus genotype 1b. *Journal of Medical Virology*.
- ⌘ Kawaoka T, Hayes CN, Ohishi W, Ochi H, Maekawa T, Abe H, Tsuge M, Mitsui F, Hiraga N, Imamura M, Takahashi S, Kubo M, Tsunoda T, Nakamura Y, Kumada H, Chayama K: Predictive value of the *IL28B* polymorphism on the effect of interferon therapy in chronic hepatitis C patients with genotypes 2a and 2b. *Journal of Hepatology*.

### Clinical Studies, Nagasaki

- ◆ Haraguchi A, Era A, Yasui J, Ando T, Ueki I, Horie I, Imaizumi M, Usa T, Abe K, Origuchi T, Eguchi K: Putative IgG4-related pituitary disease with hypopituitarism and/or diabetes insipidus accompanied with elevated serum levels of IgG4. *Endocrine Journal* 2010 (September); 57(8):719–25.
- ◆ 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* 2010 (November); 69(11):2056–7. (RR 12-09)

◆ Horie I, Ando T, Inokuchi N, Mihara Y, Miura S, Imaizumi M, Usa T, Kinoshita N, Sekine I, Kamihara S, Eguchi K: First Japanese patient treated with parathyroid hormone peptide immunization for refractory hypercalcemia caused by metastatic parathyroid carcinoma. *Endocrine Journal* 2010 (April); 57(4):287–92.

◆ 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]* 2010 (May); 56(6):82–6. (Japanese)

### Radiobiology/Molecular Epidemiology

◆ Asia Pacific Cohort Studies Collaboration (RERF: Nakachi K): Body-mass index and cancer mortality in the Asia-Pacific Cohort Studies Collaboration: pooled analyses of 424,519 participants. *Lancet Oncology* 2010 (August); 11(8):741–52.

◆ JACC Study Group (RERF: Nakachi K): Relationship between serum levels of insulin-like growth factors and subsequent risk of cancer mortality: Findings from a nested case-control study within the Japan Collaborative Cohort Study. *Cancer Epidemiology* 2010 (June); 34(3):279–84.

◆ JACC Study Group (RERF: Nakachi K): Relationship of sFas with metabolic risk factors and their clusters. *European Journal of Clinical Investigation* 2010 (June); 40(6):527–33.

### Epidemiology, Hiroshima

◆ Mabuchi K, Fujiwara S, Preston DL, Shimizu Y, Nakamura N, Shore RE: Atomic-bomb survivors: Long-term health effects of radiation. Dennis C. Shrieve, Jay S. Loeffler, eds. *Human Radiation Injury*. Philadelphia: Lippincott Williams & Wilkins; 2010, pp 89–113. (CR 3-09)

◆ Usui S, Matsumura M, Yanagida J, Shimazutsu S, Ozasa K, Ohishi W, Takiyama W, Tokumo H, Kira S, Watanabe C, Yoshimoto M, Ueki T, Yamamoto Y, Sueda Y, Watanabe T, Oda T, Soramoto E, Mukai M, Hada T, Tanimoto T, Kumagai F, Nakamura M: Report on the results of the seventeenth medical examination of atomic bomb survivors resident in North America. *Hiroshima Igaku [Journal of the Hiroshima Medical Association]* 2010 (August); 63(8): 567–92. (Japanese)

### Statistics

◆ Cologne JB: A few clarifications: Letter Re: Categorisation of continuous risk factors in epidemiological publications: a survey of current practice, by Turner EL, Dobson JE, Pocock SJ. *Epidemiologic Perspectives & Innovations* 2010 (November); 7:9.

◆ Cologne JB, Cullings HM, Furukawa K, Ross P: Attributable risk for radiation in the presence of other risk factors. *Health Physics* 2010 (November); 99(5):603–12. (RR 11-09)

## 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

- ❖ Douple EB. Risk from *in utero* radiation exposure. The 56th Annual Meeting of the Radiation Research Society, 25–29 September 2010, Maui, Hawaii, USA
- ❖ Nakamura N. Why cancer risk is higher following exposure at younger ages? The 53rd Annual Meeting of the Japan Radiation Research Society, 20–22 October 2010, Kyoto
- ❖ Douple EB (Moderator). Hiroshima and Nagasaki 65 years later—Lessons learned by the Radiation Effects Research Foundation that are helping science, physicians, patients, and the A-bomb survivors today (Panel Discussion). The 52nd Annual Meeting of the American Society of Therapeutic Radiation Oncologists, 31 October–4 November 2010, San Diego, California, USA
- ❖ Douple EB, Nakamura N, Kusunoki Y, Kodama Y, Hayashi T, Nakachi K. Genetic and molecular research contributions, challenges, and opportunities. The 52nd Annual Meeting of the American Society of Therapeutic Radiation Oncologists, 31 October–4 November 2010, San Diego, California, USA
- ❖ Okubo T. Long-term epidemiological studies of atomic bomb survivors in Hiroshima and Nagasaki—Study populations, dosimetry, and summary of health effects. The 13th Coordination and Planning Meeting of the WHO REMPAN Collaborating Centres and Liaison Institutions, 16–18 February 2011, Nagasaki

### Clinical Studies, Nagasaki

- ❖ Oka N. Methods of urinary erythrocyte morphology determination in Nagasaki Prefecture. Nagasaki Prefecture Training of Examination Technician, 29 January 2011, Isahaya

### Radiobiology/Molecular Epidemiology

- ❖ Ito R, Eguchi H, Hamatani K, Taga M, Takahashi K, Oue N, Yasui W, Nakachi K. Analysis of genetic alterations and immunoreactivity-related genes regarding microsatellite instability (MSI) in colorectal cancer among atomic-bomb survivors. The 99th Annual Meeting of the Japanese Society of Pathology, 27–29 April 2010, Tokyo
- ❖ Taga M, Ito R, Niwa Y, Misumi M, Nakachi K, Yasui W, Kusunoki Y, Hamatani K. DNA methylation of LINE1 in non-small cell lung cancer among atomic-bomb survivors. The 53rd Annual Meeting of the Japan Radiation Research Society, 20–22 October 2010, Kyoto

### Epidemiology, Hiroshima

- ❖ Ozasa K. Epidemiological survey of Japanese cedar pollinosis among community schoolchildren. The 22nd Spring Meeting of the Japanese Society of Allergology, 9 May 2010, Kyoto
- ❖ Ozasa K, Washio M, Fukushima W, Oofuji S. Educational activity of the prevention and control of influenza. The 69th

Annual Meeting of the Japanese Society of Public Health, 27–29 October 2010, Tokyo

- ❖ Kasagi F. Creation of health risk-assessment chart. FY2010 Seminar of Biostatistics Center, Kurume University, 4–5 March 2011, Minamioguni-machi, Kumamoto

### Statistics

- ❖ Khattree R. Antieigenvalues and antieigenvalues in applied statistics. International Conference on Mathematical Sciences in Honour of Professor A. M. Mathai, 3–5 January 2011, Kerala, India

### Information Technology

- ❖ Katayama H, Dodo N. Various checks in the standard database system for the regional cancer registries. The 32nd Annual Meeting of the International Association of Cancer Registries, 12–14 October 2010, Yokohama
- ❖ Katayama H. RERF database and its implications for future studies. The 13th Coordination and Planning Meeting of the WHO REMPAN Collaborating Centres and Liaison Institutions, 16–18 February 2011, Nagasaki

## Scientific Lectures and Seminars Presented at RERF

1 April 2010–31 March 2011

*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.*

23 April 2010, **Noriko Ishida**, Postdoctoral Scientist, Graduate School of Science and Technology, Nagasaki University, The 255th Hiroshima Statistics Study Group: “Risk assessment using transported estimates correcting for measurement errors”

21 May 2010, **William J. Schull**, President, Schull Institute, U.S.A.: “ABCC in the olden days”

28 May 2010, **Isamu Nagai**, Ph.D. candidate, Department of Mathematics, Graduate School of Science, Hiroshima University, The 256th Hiroshima Statistics Study Group: “A bias-corrected Cp criterion for optimizing ridge parameters in multivariate generalized ridge regression for GMANOVA model”

2 July 2010, **Hirofumi Wakaki**, Professor, Department of Mathematics, Graduate School of Science, Hiroshima University, The 257th Hiroshima Statistics Study Group: “Two stage sampling procedure for nonnormal population”

3 August 2010, **Robert Delongchamp**, Professor, Department of Epidemiology, College of Public Health, University of Arkansas for Medical Sciences, U.S.A.: “Genomic data and epidemiological studies”

1 October 2010, **Ravindra Khattree**, Senior Research Scientist, Department of Statistics, Radiation Effects Research Foundation, The 258th Hiroshima Statistics Study Group: “Antieigenvalues and antieigenvectors in applied statistics”

29 October 2010, **Kengo Kato**, Assistant Professor, Department of Mathematics, Graduate School of Science, Hiroshima University, The 259th Hiroshima Statistics Study Group: “Smoothed quantile regression for panel data (with Antonio Galvao)”

19 November 2010, **Kazuyuki Koizumi**, Assistant Professor, Department of Mathematical Information Science, Tokyo University of Science, The 260th Hiroshima Statistics Study Group: “Improved omnibus test statistic for multivariate normality”

17 December 2010, **Robert D. Abbott**, Senior Research Scientist, Department of Statistics, Radiation Effects Research Foundation, The 261st Hiroshima Statistics Study Group: “A simple approach for exact testing in survival analysis using logistic regression”

24 January 2011, **Gertraud Maskarinec**, Professor, Cancer Research Center, University of Hawaii, U.S.A.: “Ethnic differences in the association of soy foods with cancer risk”

28 January 2011, **Kenichi Hayashi**, Ph.D. candidate,

Division of Mathematical Science, Graduate School of Engineering Science, Osaka University, The 262nd Hiroshima Statistics Study Group: “Classification methods for asymmetric mislabeled data”

## RERF Colloquia (FY 2010)

*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.*

16 April 2010, **Misa Imaizumi**, Chief, Division of Radiology, Department of Clinical Studies, Nagasaki, “Subclinical hypothyroidism and cardiovascular disease”

28 May 2010, **Hiromi Sugiyama**, Associate Senior Scientist, Department of Epidemiology, “Studies on skin cancer incidence among the RERF Life Span Study cohort, Hiroshima and Nagasaki”

25 June 2010, **Roy E. Shore**, Vice Chairman and Chief of Research, “Evidence from epidemiologic studies regarding low-dose radiation effects”

23 July 2010, **John B. Cologne**, Research Scientist, Department of Statistics, “Time scales in Cox regression analyses”

29 October 2010, **Yuko Hirai**, Senior Scientist, Laboratory of Cytogenetics, Department of Genetics, “Evaluation of tooth enamel dose of distally exposed A-bomb survivors by electron spin resonance (ESR)”

19 November 2010, **Yasuharu Niwa**, Research Scientist, Laboratory of Cell Biology, Department of Radiobiology/Molecular Epidemiology, “Analyses of epigenetic status in several blood cell populations for evaluation of the effects of radiation and aging”

17 December 2010, **Ritsu Sakata**, Research Scientist, Department of Epidemiology, “Mail Survey 2008 on epidemiological factors in the extended Life Span Study population”

21 January 2011, **Michiko Yamada**, Assistant Chief, Department of Clinical Studies, “Research into cognitive function among the Adult Health Study cohort: Past results and future plans”

## Awards Received by RERF Directors and Employees

1 April 2010–31 March 2011

13–16 June 2010, **Munehika Misumi**, Research Scientist, Department of Statistics, received a New Investigator Award at the American Statistical Association (ASA) Conference on Radiation and Health, held in Annapolis, Maryland, USA.

18 June 2010, **Toshinori Kurisu**, Assistant Chief of Technicians, Division of Health Examinations, Department of Clinical Studies, Hiroshima, received a Hiroshima Prefectural Award for Distinguished Hazardous Materials Officer.

12–14 October 2010, **Midori Soda**, Assistant Chief, Department of Epidemiology, Nagasaki, received a Poster Award at the 32nd Annual Meeting of the International Association of Cancer Registries (IACR), held in Yokohama.

15 October 2010, at the 19th Annual Meeting of the Japanese Association of Cancer Registries (JACR) held in Yokohama, **Naohiro Hayakawa** and **Aki Tanida**, Group Leaders, **Shoji Nishio**, Adjunct Specialist, **Midori Azeuchi**, Temporary Employee, Tumor and Tissue Registry Office, Department of Epidemiology, Hiroshima, **Mamiko Araki** and **Asako Kokubu**, Temporary Employees, Tumor and Tissue Registry Office, Department of Epidemiology, Nagasaki, received a FY2010 JACR Distinguished Service Award for Registry Operator.

12 November 2010, **Misa Imaizumi**, Chief, Division of Radiology, Department of Clinical Studies, Nagasaki, received the 39th Shichijo Prize at the 53rd Annual Meeting of the Japan Thyroid Association, held in Nagasaki.

7 January 2011, **RERF Nagasaki Laboratory** received a Fire Safety Co-operative Award from Nagasaki City.

21–22 January 2011, **Kazunori Kodama**, Chief Scientist, received a Distinguished Service Award at the 21st Annual Scientific Meeting of the Japan Epidemiological Association, held in Sapporo.

18 February 2011, **Toshiteru Okubo**, Chairman, received the 10th International Association of Radiopathology (IAR) Prize, at the 13th meeting of the World Health Organization's (WHO) Radiation Emergency Medical Preparedness and Assistance Network (REMPAN), held in Nagasaki.



## FY2010 External Research Funds

Name of Outside Organization	Number of Grants	Actual Amounts of Funding Total
Ministry of Health, Labour and Welfare (MHLW)	12	¥24,400,000
Ministry of Education, Culture, Sports, Science and Technology (MEXT)	9	¥17,615,000
National Institute on Biomedical Innovation	1	¥5,000,000
Japan Arteriosclerosis Prevention Fund	1	¥2,000,000
Funds for Cancer-related Research and Technology Development	3	¥1,900,000
Smoking Research Foundation	1	¥2,000,000
Princess Takamatsu Cancer Research Fund	1	¥2,000,000
US National Cancer Institute (NCI) Contract	1	¥25,482,342
US National Institute of Allergy and Infectious Diseases	1	¥190,741,054
Grand Total	30	¥271,138,396

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.

## FY2010 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
<p><b>Department of Clinical Studies, Hiroshima</b> 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</p>	<p>MHLW Scientific Research Grant Comprehensive Research on Aging and Health Noriko Yoshimura, Special Contract Associate Professor, The University of Tokyo Hospital</p>	<p>Saeko Fujiwara</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥4,500,000</p>
<p>Study of motor disturbances (fractures, joint disorders) in the elderly (including those with dementia or other diseases)</p>	<p>MHLW Funds for Research and Technological Development for Longevity Healthcare Atsushi Harada, Department Chief, Hospital, National Center for Geriatrics and Gerontology</p>	<p>Saeko Fujiwara</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥8,500,000</p>
<p>Prediction and diagnosis of fractures and development of medicines targeting bone quality</p>	<p>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</p>	<p>Waka Ohishi</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥5,000,000</p>
<p>Strategies of prevention from osteoporosis for efficiently minimizing care needs</p>	<p>MHLW Health Care Promotion Project Plan for the Elderly Masao Fukunaga, President, Kawasaki Medical School</p>	<p>Saeko Fujiwara</p>	<p>15 July 2010– 31 March 2011</p>	<p>¥1,500,000</p>
<p>Study for development of a lifestyle diseases prevention database through a large-scale cohort-based collaborative study, and for its high-degree application</p>	<p>MHLW Scientific Research Grant Comprehensive Research on Lifestyle-related Diseases including Cardiovascular Diseases and Diabetes Mellitus Hirotsugu Ueshima, Special Contract Professor, Lifestyle-related Disease Prevention Center, Shiga University of Medical Science</p>	<p>Michiko Yamada Associate Investigator: Fumiyoishi Kasagi (Department of Epidemiology)</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥2,000,000</p>
<p>Longitudinal/cross-sectional studies to generate evidence for diagnosis/management of metabolic syndrome to be used for specified medical checkup and health guidance</p>	<p>MHLW Scientific Research Grant Comprehensive Research on Lifestyle-related Diseases including Cardiovascular Diseases and Diabetes Mellitus Takashi Kadowaki, Professor, The University of Tokyo Graduate School of Medicine</p>	<p>Michiko Yamada Cooperative Investigator: Yoshimi Tatsukawa</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥1,200,000</p>
<p>Atherosclerosis, dementia and ADL evaluations among the Adult Health Study subjects</p>	<p>Japan Arteriosclerosis Prevention Fund Scientific Research Grant Chief of Research Group: Hirotsugu 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</p>	<p>Saeko Fujiwara Fumiyoishi Kasagi (Department of Epidemiology)</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥2,000,000 The above amount includes funds allocated to the collaborator(s) at Hiroshima University.</p>

## FY2010 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
<p><b>Department of Clinical Studies, Hiroshima</b> A case-control study of lifestyle and insulin resistance as risk factors for hepatocellular carcinoma</p>	<p>MEXT Grant-in-Aid for Scientific Research Scientific Research (C) Waka Ohishi, Chief, Division of Clinical Laboratories, Department of Clinical Studies, RERF</p>	<p>Saeko Fujiwara John B. Cologne (Department of Statistics)</p>	<p>1 April 2010– 31 March 2011</p>	<p>Direct cost ¥500,000 Indirect cost ¥150,000</p>
<p><b>Department of Clinical Studies, Nagasaki</b> Diagnosis of pathologic conditions and genetic basis of progressive cardiac conduction disturbance</p>	<p>MHLW Scientific Research Grant Refractory Disease Research Grants Naomasa Makita, Professor, Nagasaki University Graduate School of Biomedical Sciences</p>	<p>Masazumi Akahoshi</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥1,500,000</p>
<p><b>Department of Genetics</b> Establishment of cytogenetic study network for radiation accident</p>	<p>MEXT Grant-in-Aid for Scientific Research Yumiko Suto, Head, Biodosimetry Section, Department of Radiation Dosimetry, Research Center for Radiation Emergency Medicine, National Institute of Radiological Sciences</p>	<p>Yoshiaki Kodama</p>	<p>15 June 2010– 14 June 2011</p>	<p>Expenses for supplies (¥350,000 equivalent)</p>
<p>Analysis of the <i>in vivo</i> mechanisms to establish radiation-induced mutagenesis</p>	<p>MEXT Grant-in-Aid for Scientific Research Scientific Research (S) Hiroshi Mitani, Professor, Graduate School of Frontier Sciences, The University of Tokyo</p>	<p>Asao Oda</p>	<p>1 April 2010– 31 March 2011</p>	<p>Direct cost ¥2,000,000 Indirect cost ¥600,000</p>
<p>An animal model for evaluation of genetic risk of radiation in human females</p>	<p>MEXT Grant-in-Aid for Scientific Research Scientific Research (B) Jun-ichi Asakawa, Research Scientist, Department of Genetics, RERF</p>		<p>1 April 2010– 31 March 2011</p>	<p>Direct cost ¥3,900,000 Indirect cost ¥1,170,000</p>
<p><b>Department of Radiobiology/Molecular Epidemiology</b> Studies of immunosenescence and other late effects of acute ionizing radiation exposure in atomic-bomb survivors</p>	<p>US National Institute of Allergy and Infectious Diseases Principal Investigator: Kei Nakachi, RERF Consultant and Project Principal Scientist Cooperative Principal Investigators: Yoichiro Kusunoki, Chief, Department of Radiobiology/Molecular Epidemiology, RERF Tomonori Hayashi, Assistant Chief, Department of Radiobiology/Molecular Epidemiology, RERF</p>	<p>Evan B. Douple (Associate Chief of Research) Kazue Imai Kengo Yoshida Reiko Ito Saeko Fujiwara (Department of Clinical Studies) Waka Ohishi (Department of Clinical Studies) Kotaro Ozasa (Department of Epidemiology) Kyoji Furukawa (Department of Statistics) Munehika Misumi (Department of Statistics)</p>	<p>1 October 2009– 30 September 2014</p>	<p>Direct cost ¥159,169,948 Indirect cost ¥31,571,106</p>



## FY2010 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
<p><b>Department of Radiobiology/Molecular Epidemiology</b> Molecular epidemiology study on immunogenetic and environmental factors involved in risks of inflammation-associated diseases</p>	<p>MEXT Grant-in-Aid for Scientific Research Scientific Research (B) Tomonori Hayashi, Assistant Chief, Department of Radiobiology/Molecular Epidemiology, RERF</p>	<p>Associate Investigators: Kei Nakachi (RERF Consultant and Project Principal Scientist) Yoichiro Kusunoki Takahiko Ogawa</p>	<p>1 April 2010– 31 March 2011</p>	<p>Direct cost ¥5,200,000 Indirect cost ¥1,560,000</p>
<p>Molecular oncological study on lung cancer among A-bomb survivors</p>	<p>MEXT Grant-in-Aid for Scientific Research Young Investigators (B) Masataka Taga, Research Scientist, Cell Biology Laboratory, Department of Radiobiology/Molecular Epidemiology, RERF</p>		<p>1 April 2010– 31 March 2011</p>	<p>Direct cost ¥1,100,000 Indirect cost ¥330,000</p>
<p>Study on molecular mechanism and clinical application in carcinogenesis in relation to radiation disorder and host genetic factors</p>	<p>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</p>	<p>Yoichiro Kusunoki Tomonori Hayashi</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥2,500,000 The above amount is funds allocated to the RERF collaborator(s).</p>
<p>Molecular epidemiology of lifestyle-related diseases in relation to biological effects of cigarette smoking, using the data from a general population cohort study</p>	<p>Smoking Research Foundation Tomonori Hayashi, Assistant Chief, Department of Radiobiology/Molecular Epidemiology, RERF</p>		<p>1 April 2010– 31 March 2011</p>	<p>¥2,000,000</p>
<p>Molecular mechanisms on radiation carcinogenesis—colon cancer and papillary thyroid cancer among A-bomb survivors</p>	<p>Princess Takamatsu Cancer Research Fund Kiyohiro Hamatani, Chief, Cell Biology Laboratory, Department of Radiobiology/Molecular Epidemiology, RERF</p>	<p>Reiko Ito Kei Nakachi (RERF Consultant and Project Principal Scientist)</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥2,000,000</p>
<p><b>Department of Epidemiology, Hiroshima</b> Study on the molecular mechanism of carcinogenesis due to radiation exposure</p>	<p>Funds for Cancer-related Research and Technology Development Shunichi Yamashita, Professor, Department of Molecular Medicine, Atomic Bomb Disease Institute, Nagasaki University Graduate School of Biomedical Sciences</p>	<p>Fumiyoshi Kasagi</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥1,000,000</p>
<p>Immuno-epidemiological study of cedar pollen allergy</p>	<p>MEXT Grant-in-Aid for Scientific Research Scientific Research (C) Kotaro Ozasa, Chief, Department of Epidemiology, RERF</p>		<p>1 April 2010– 31 March 2011</p>	<p>Direct cost ¥50,000 Indirect cost ¥15,000</p>

## FY2010 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
<p><b>Department of Epidemiology, Hiroshima</b> A cohort study of lifestyle associated with oldest-old longevity</p>	<p>MEXT Grant-in-Aid for Scientific Research Scientific Research (B) Akiko Tamakoshi, Professor, Public Health, Aichi Medical University</p>	<p>Associate Investigator: Kotaro Ozasa</p>	<p>1 April 2010– 31 March 2011</p>	<p>Since this person is an associate investigator, research funds were not allocated to him. ¥1,500,000</p>
<p>Analytical epidemiological study for influenza and currently-concerned respiratory infectious diseases</p>	<p>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</p>	<p>Kotaro Ozasa</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥500,000</p>
<p>Study regarding initiation of follow-up of the 2010 national health and nutrition examination survey subjects (NIPPON DATA 2010) and continuation of follow-up of the NIPPON DATA 80/90</p>	<p>MHLW Scientific Research Grant Comprehensive Research on Lifestyle-related Diseases including Cardiovascular Diseases and Diabetes Mellitus Katsuyuki Miura, Professor, Department of Health Science, Shiga University of Medical Science</p>	<p>Fumiyoshi Kasagi</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥900,000</p>
<p>Study for development of a lifestyle diseases prevention database through a large-scale cohort-based collaborative study, and for its high-degree application</p>	<p>MHLW Scientific Research Grant Comprehensive Research on Lifestyle-related Diseases including Cardiovascular Diseases and Diabetes Mellitus Hirotugu Ueshima, Contract Professor, Lifestyle-related Disease Prevention Center, Shiga University of Medical Science</p>	<p>Associate Investigator: Fumiyoshi Kasagi</p>	<p>1 April 2010– 31 March 2011</p>	<p>Since this person is an associate investigator, research funds were not allocated to him.</p>
<p><b>Department of Epidemiology, Nagasaki</b> Study on utilization of population-based cancer registry data for cancer control and cancer research</p>	<p>Funds for Cancer-related Research and Technology Development Team of Research Group for Population-based Cancer Registries Akiko Ioka, Assistant Chief, Planning and Research Section, Department of Cancer Control and Statistics, Osaka Medical Center for Cancer and Cardiovascular Diseases</p>	<p>Midori Soda Cooperative Investigator: Hiroaki Katayama (Department of Information Technology)</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥700,000</p>
<p>Research on the current status of cancer incidence/mortality trends</p>	<p>MHLW Scientific Research Grant Research Project for the Third Anti-cancer Strategy Tomofaka Sobue, Chief, Cancer Information Services and Surveillance Division, Center for Cancer Control and Information Services, National Cancer Center</p>	<p>Midori Soda Cooperative Investigator: Hiroaki Katayama (Department of Information Technology)</p>	<p>1 April 2010– 31 March 2011</p>	<p>¥700,000</p>

## FY2010 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
<p><b>Departments of Epidemiology, Hiroshima and Nagasaki</b> Support for epidemiological studies of cancer among atomic-bomb survivors</p>	<p>National Cancer Institute (NCI) Contract National Cancer Institute, Bethesda, Maryland, USA 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</p>	<p>Evan B. Duple (Associate Chief of Research) Nori Nakamura (Chief Scientist) Shoji Tokuoka (RERF Consultant) Fumiyoshi Kasagi (Department of Epidemiology) Akihiko Suyama (Department of Epidemiology, Nagasaki) Midori Soda (Department of Epidemiology, Nagasaki) 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)</p>	<p>1 December 2008– 30 November 2013</p>	<p>Direct cost ¥17,733,019 Indirect cost ¥7,749,323</p>
<p><b>Department of Information Technology</b> Construction of the epidemiological database for the people living in Semipalatinsk test site area</p>	<p>MEXT Grant-in-Aid for Scientific Research Scientific Research (C) Hiroaki Katayama, Chief, Department of Information Technology, RERF</p>		<p>1 April 2010– 31 March 2011</p>	<p>Direct cost ¥800,000 Indirect cost ¥240,000</p>
<b>Grand Total</b>				<b>¥271,138,396</b>

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<b>Department of Clinical Studies, Hiroshima Ni-Hon-Sea Study</b> (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) Mimori 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) Nerishi K Hida A (Department of Clinical Studies, Nagasaki) Tatsukawa Y 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	Nerishi 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) Berrington A (U.S. National Cancer Institute)	2002
Ophthalmologic study of children of atomic-bomb survivors	Minamoto A (Minamoto Eye Clinic)	Nakashima E (Department of Statistics) Nerishi K Hida A (Department of Clinical Studies, Nagasaki) Tatsukawa Y 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

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<p><b>Department of Clinical Studies, Hiroshima</b> 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</p>	Fujiwara S	<p>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)</p>	<p>Suzuki G (Clinic, International University of Health and Welfare) Tahara E (Hiroshima Cancer Seminar)</p>	2004
<p>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</p>	Fujiwara S	<p>Ohishi W Akahoshi M (Department of Clinical Studies, Nagasaki) Cologne JB (Department of Statistics)</p>	<p>Suzuki G (Clinic, International University of Health and Welfare)</p>	2005
<p>Glaucoma study in atomic-bomb survivors</p>	Kiuchi Y (Hiroshima University)	<p>Nakashima E (Department of Statistics) Nerishi K Hida A (Department of Clinical Studies, Nagasaki) Fujiwara S Akahoshi M (Department of Clinical Studies, Nagasaki)</p>	<p>Yokoyama T (Hiroshima University) Uematsu M (Nagasaki University) Tsuiki E (Nagasaki University) Kitaoka T (Nagasaki University)</p>	2005
<p>Inflammation and cancer incidence in atomic- bomb survivors</p>	Nerishi K	<p>Hsu WL (Department of Statistics) Nakashima E (Department of Statistics) Tatsukawa Y Soda M (Department of Epidemiology, Nagasaki) Yamada M Fujiwara S Cologne JB (Department of Statistics) Akahoshi M (Department of Clinical Studies, Nagasaki)</p>	<p>Little MP (Imperial College, UK) Nishi N (National Institute of Health and Nutrition)</p>	2005
<p>Assessment of statistical methods for intermediate risk factors in noncancer disease and mortality</p>	William L (University of Washington, USA)	<p>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)</p>	<p>Kopecky KJ (University of Washington, Fred Hutchinson Cancer Research Center, USA) Davis S (University of Washington, Fred Hutchinson Cancer Research Center, USA)</p>	2006



## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<p><b>Department of Clinical Studies, Hiroshima</b> Risk factors and modifiers related to clustering of noncancer disease in the AHS: Analysis using statistical data mining techniques</p>	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		2006
<p>Application of causal modeling on radiation, inflammation, and selected radiation/inflammation-induced health outcomes</p>	Hsu WL (Department of Statistics)	Nakashima E (Department of Statistics) Furukawa K (Department of Statistics) Sakata R (Department of Epidemiology) Neriishi K Takahashi I Yamada M Fujiwara S	Kakuma T (Kurume University) Araki Y (Kurume University)	2007
<p>Body mass index (BMI) and mortality</p>	Thun M (American Cancer Society)	Ohishi W Hida A (Department of Clinical Studies, Nagasaki) Shore RE (Vice Chairman and Chief of Research)		2008
<p>Investigation of storage conditions for cataract tissue of A-bomb survivors, and its collection and storage program</p>	Neriishi K	Nakashima E (Department of Statistics) Ohishi W Fujiwara S Hida A (Department of Clinical Studies, Nagasaki) Tatsukawa Y 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) Tsuiki 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

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<p><b>Department of Clinical Studies, Hiroshima</b> Evaluation of retinal arteriosclerosis and age-related macular degeneration using stored retina images with standardized measurements in relation to glaucoma development in atomic-bomb survivors and to association with aortic arteriosclerosis</p>	Neritshi K	Takahashi I Nakashima E (Department of Statistics) Hsu WL (Department of Statistics) Fujiwara S Hida A (Department of Clinical Studies, Nagasaki) Akahoshi M (Department of Clinical Studies, Nagasaki)	Yanagi M (Hiroshima University) Kawasaki R (University of Melbourne, Australia) Yokoyama T (Hiroshima University) Takamatsu M (Hiroshima University) Kinoshita H (Nagasaki University) Tsuiki E (Nagasaki University) Uematsu M (Nagasaki University) Kumagami T (Nagasaki University) Kiuchi Y (Hiroshima University) Kitaoka T (Nagasaki University)	2010
<p>Study of body composition of the Hiroshima AHS population</p>	Tatsukawa Y	Fujiwara S Misumi M (Department of Statistics) Ohishi W Yamada M Kasagi F (Department of Epidemiology)	Harris TB (National Institute on Aging, USA)	2010
<p><b>Department of Clinical Studies, Nagasaki</b> Relationship between Brugada-type electrocardiogram and prostate cancer</p>	Haruta D (Nagasaki University)	Akahoshi M Hida A Sera N Imazumi M Nakashima E (Department of Statistics)	Seto S (Nagasaki University)	2007
<p>Cardiovascular disease and atomic-bomb radiation—From view point of risk factor clustering</p>	Sera N	Akahoshi M Hida A Imazumi M Nakashima E (Department of Statistics)	Seto S (Nagasaki University)	2007
<p>Incidence and risk factors of fatty liver</p>	Tsuneto A (Nagasaki University)	Nakashima E (Department of Statistics) Nakashima E (Department of Statistics) Akahoshi M	Gussekloo J (Leiden University Medical Center, Netherlands)	2008
<p>The association between subclinical thyroid dysfunction and cardiovascular disease and mortality. An individual participant pooled analysis of large international cohort studies</p>	Rodondi N (University of Lausanne, Switzerland)	Imazumi M	Gussekloo J (Leiden University Medical Center, Netherlands)	2008
<p>Prognostic significance of VPCs in taking consideration of their origins</p>	Haruta D (Nagasaki University)	Nakashima E (Department of Statistics) Fujiwara S (Department of Clinical Studies, Hiroshima) Akahoshi M	Gussekloo J (Leiden University Medical Center, Netherlands)	2008

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<p><b>Department of Clinical Studies, Nagasaki</b> The incidence and prognostic value of the early repolarization electrocardiogram pattern</p> <p>The association between chronic kidney disease and cardiovascular disease among atomic-bomb survivors</p>	<p>Haruta D (Nagasaki University)</p> <p>Tsuneto A (Nagasaki University)</p>	<p>Nakashima E (Department of Statistics) Akahoshi M</p> <p>Takahashi I (Department of Clinical Studies, Hiroshima) Hida A Sera N Imazumi M Yamada M (Department of Clinical Studies, Hiroshima) Nerishi 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</p>	<p>Tsuneto A (Nagasaki University)</p>	<p>2008</p> <p>2009</p>
<p>Diagnosis of pathologic conditions and genetic basis of progressive cardiac conduction disturbance</p>	<p>Makita N (Nagasaki University)</p>	<p>Akahoshi M</p>		<p>2010</p>
<p><b>Department of Genetics</b> Molecular alterations in early-onset breast and ovarian cancers among atomic-bomb survivors</p>	<p>Mabuchi K (U.S. National Cancer Institute) Land CE (U.S. National Cancer Institute)</p>	<p>Hirai Y</p>		<p>2001</p>
<p>Mutation detection in rat oocytes</p>	<p>Kamiguchi Y (Asahikawa Medical College)</p>	<p>Asakawa J</p>		<p>2003</p>
<p>Measurement of thermal neutron dose in tooth enamel</p>	<p>Rühm W (Munich University/ National Research Center for Environment and Health, Germany)</p>	<p>Hirai Y Nakamura N (Chief Scientist)</p>		<p>2004</p>

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<p><b>Department of Genetics</b> Pluralistic characterization for genome information about cardiovascular diseases such as hypertension, and development of epoch-making methods for either diagnosis or therapy</p>	Morisaki T (National Cardiovascular Center)	Takahashi N		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
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
Establishment of a recombinant mouse model for assessment of genetic effects of radiation at low doses	Hiroshi Mitani (The University of Tokyo Graduate School)	Noda A		2009
Estimation of genetic effects of radiation in male germ cells of mice: Study for assessment of high-density microarray CGH platform	Shimada Y (National Institute of Radiological Sciences)	Asakawa J		2009
Evaluation of the nonmelanoma skin cancer risk among heterozygotes bearing a founder mutation allele unique to a Japanese population at xeroderma pigmentosum group A (XPA) gene	Mabuchi K (U.S. National Cancer Institute) Kraemer KH (U.S. National Cancer Institute)	Hirai Y Nakamura N (Chief Scientist)		2009
Pilot study of trans-generational effects of atomic-bomb radiation using a high-density array system to detect copy number variants	Nishida N (The University of Tokyo) Tokunaga K (The University of Tokyo)	Takahashi N Satoh Y		2010
Study of radiation-induced circulatory diseases using animal models	Kokubo T (National Institute of Radiological Sciences) Inaba T (Research Institute for Radiation Biology and Medicine, Hiroshima University)	Takahashi N Niwa Y (Department of Radiobiology/ Molecular Epidemiology)		2011

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<b>Department of Radiobiology/Molecular Epidemiology</b> Study on gene alterations and genetic susceptibility in sporadic lung carcinogenesis (SNP)	Shimizu K (Okayama University)	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
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		2002
Study on the role of hypoxia-responsive gene, <i>HIF1<math>\alpha</math></i> in radiation effects on cells	Tanimoto K (Hiroshima University)	Nakachi K (RERF Consultant and Project Principal Scientist) Imai K	Sueoka E (Saga University) Aragane N (Saga University) Eguchi H (Saitama Medical University)	2002
Collection of fresh thyroid cancer tissues (Hiroshima)	Hamatani K	Neriishi K (Department of Clinical Studies) Nakachi K (RERF Consultant and Project Principal Scientist)	Takeichi N (Takeichi Clinic)	2004
Study on thyroid cancer among A-bomb survivors (Hiroshima)	Hamatani K	Taga M Ito R	Arihiro K (Hiroshima University) Hayashi Y (Asa Municipal Hospital)	2002
Study on the cytolethal distending 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)		2001



## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<b>Department of Radiobiology/Molecular Epidemiology</b> 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)	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	Sasatani M (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
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	Nakachi K (RERF Consultant and Project Principal Scientist)	Hamatani K Taga M Ito R	Yasui W (Hiroshima University)	2004
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	Hamatani 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)	Hamatani K Taga M Ito R Nakachi K (RERF Consultant and Project Principal Scientist)		2006

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<b>Department of Radiobiology/Molecular Epidemiology</b> Study on the mechanisms of radiation-induced genetic instability using peripheral lymphocytes	Homma M (National Institute of Health Sciences)	Kusunoki Y Hamasaki K (Department of Genetics)		2008
Clinical- and molecular-pathological analysis of sporadic gastric cancer	Yasui W (Hiroshima University)	Ito R Nakachi K (RERF Consultant and Project Principal Scientist)		2004
Development of new statistical models for RERF case-studies	Izumi S (Oita University)	Nakachi K (RERF Consultant and Project Principal Scientist) Furukawa K (Department of Statistics)		2006
Study on thyroid cancer among A-bomb survivors (Nagasaki)	Hamatani K	Soda M (Department of Epidemiology, Nagasaki)	Nakashima M (Nagasaki University) Sekine I (Nagasaki Red Cross Blood Center), 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 CC (U.S. National Cancer Institute) Yasui W (Hiroshima University) Tahara E (Hiroshima Cancer Seminar)	2004
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
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		1998
Stem cell biology with special reference to radiation and drug effects	Hayashi T	Nakachi K (RERF Consultant and Project Principal Scientist)	Trosko JE (Michigan State University, USA) Chang CC (Michigan State University, USA) Hayashi I (Hiroshima University)	2002

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<b>Department of Radiobiology/Molecular Epidemiology</b> Assessment of statistical methods for genome data analysis	Imai K	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	Takeichi N (Takeichi Clinic)	Hamatani K Nakachi K (RERF Consultant and Project Principal Scientist)		2008
<b>Department of Epidemiology, Hiroshima</b> 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) Tokunaka S (RERF Consultant)		2001
Task group of epidemiology on radiological protection standard	Kasagi F		Akiba S (Kagoshima University) Yoshinaga S (National Institute of Radiological Sciences) Doi K (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) Kunukita N (National Institute of Public Health) Yoshimoto K (Radiation Effects Association)	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) Mabuchi K (U.S. National Cancer Institute) Davis S (University of Washington, USA) Kopecky KJ (University of Washington, USA)	2006

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<b>Department of Epidemiology, Hiroshima</b> 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	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) 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

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<p><b>Department of Epidemiology, Hiroshima</b>            Confounding or interaction of anthropometric factors with radiation on colon cancer incidence in the Life Span Study (LSS)</p>	<p>Semmens E (University of Washington, USA)</p>	<p>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)</p>	<p>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)</p>	<p>2008</p>
<p>Esophageal and gastric cancers: Patterns and predictors of risk in Hiroshima and Nagasaki, Japan</p>	<p>Kennedy BS (Georgetown University, USA)</p>	<p>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            Cologne JB (Department of Statistics)            Cullings HM (Department of Statistics)            Yamada M (Department of Clinical Studies)</p>	<p>Mabuchi K (U.S. National Cancer Institute)            Chow WH (U.S. National Cancer Institute)            Nishi N (National Institute of Health and Nutrition)</p>	<p>2008</p>
<p>Timing of menarche and first birth in relation to risk of breast cancer in A-bomb survivors</p>	<p>McDougall J (University of Washington, USA)</p>	<p>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)</p>	<p>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)</p>	<p>2008</p>



## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<b>Department of Epidemiology, Hiroshima</b> 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)	Veiga L (U.S. National Cancer Institute) Lubin J (U.S. National Cancer Institute)	2008
A proposal to join the Asia Cohort Consortium Project 1: Tobacco smoking, alcohol drinking, body mass index, and risk of rare cancers	Potter J (Fred Hutchinson Cancer Research Center, USA) Kang D (Seoul National University College of Medicine, Korea)	Grant EJ Ozasa K Suyama A (Department of Epidemiology, Nagasaki) Fujiwara S (Department of Clinical Studies) Akahoshi M (Department of Clinical Studies, Nagasaki) Shore RE (Vice Chairman and Chief of Research)		2010
<b>Department of Epidemiology, Nagasaki</b> 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	Miyazaki Y (Nagasaki University)	Hsu WL (Department of Statistics) Suyama A Soda M	Iwanaga M (Kwassui Woman's College) Tomonaga M (Nagasaki Red Cross Atomic Bomb Hospital) 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

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<b>Department of Epidemiology, Nagasaki</b> 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
<b>Department of Statistics</b> 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 Mistumi 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 A-bomb survivors in Japan	Mori T (National Institute of Radiological Sciences)	Cullings HM Cologne JB Shimizu Y (Part-time Professional, Department of Epidemiology)		2005

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<p><b>Department of Statistics</b> Development of instrumental variables-based methods for evaluating errors in radiation dose and adjusting risk estimates</p>	Carter R (The State University of New York at Buffalo, USA)	Cullings HM Cologne JB		2007
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	Wieser A (German Research Center for Environmental Health: Helmholtz Zentrum München, Germany)	2007
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	Wieser A (German Research Center for Environmental Health: Helmholtz Zentrum München, Germany)	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 Grant EJ (Department of Epidemiology), 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
Thermoluminescent dosimetry of gamma dose to tiles and bricks	Maruyama T (National Institute of Radiological Sciences)	Cullings HM		1999

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<b>Department of Statistics</b> 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.	Mabuchi K (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) Hida A (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
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)	Wang JD (College of Public Health, Taiwan University) Hwang JS (Academia Sinica, Taiwan)	2009
Application of casual 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

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<p><b>Department of Statistics</b> Cohort study on weight fluctuation and cancer and cardiovascular disease incidence and mortality</p>	<p>Nanri A (Research Institute, International Medical Center of Japan) Mizoue T (Research Institute, International Medical Center of Japan)  Cologne JB</p>	<p>Akahoshi M (Department of Clinical Studies, Nagasaki) Soda M (Department of Epidemiology, Nagasaki) 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  Cologne JB</p>	<p>Araki Y (Kurume University)   Langholz B (University of Southern California, USA) Fujii Y (Miyazaki University) Izumi S (Oita University) Kopecky KJ (University of Washington, USA)</p>	<p>2009</p> <p>2008</p>
<p>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</p>	<p>Shimizu K (Okayama University)</p>	<p>Cologne JB</p>	<p>Ishida N (Preventive Clinical Lab. Co., Ltd.)</p>	<p>2009</p> <p>2008</p>
<p>Study on estimability of waist circumference and its application to risk analysis for metabolic syndrome</p>	<p>Nakamura T (Nagasaki University)</p>	<p>Ichimaru S (Department of Clinical Studies, Nagasaki) Soda M (Department of Epidemiology, Nagasaki) Akahoshi M (Department of Clinical Studies, Nagasaki) Cullings HM Nakashima E Misumi M</p>	<p>Kaiser JC (National Research Center for Environment and Health, Germany) Jacob P (National Research Center for Environment and Health, Germany) Rühm W (Munich University/National Research Center for Environment and Health, Germany) Walsh L (Federal Office of Radiation Protection, Germany)</p>	<p>2008</p>
<p>Cancer risk estimation after acute radiation exposure: Impacts of the neutron dose and non-parametric analysis of risk coefficients</p>	<p>Cullings HM</p>	<p>Cullings HM</p>	<p>Kaiser JC (National Research Center for Environment and Health, Germany) Jacob P (National Research Center for Environment and Health, Germany) Rühm W (Munich University/National Research Center for Environment and Health, Germany) Walsh L (Federal Office of Radiation Protection, Germany)</p>	<p>2008</p>

## FY 2010 Collaborative Studies (Without External Funds)

Title of Research	Name of Chief of Research Group	Investigator(s) at RERF	Investigator(s) outside RERF	Initiation Year
<p><b>Department of Statistics</b> Cancer risk estimation after acute radiation exposure: Impacts of radiobiological effects on the risk estimate</p>	Cullings HM		Kaiser JC (National Research Center for Environment and Health, Germany) Eidemüller M (National Research Center for Environment and Health, Germany) Jacob P (National Research Center for Environment and Health, Germany)	2008
<p><b>Department of Information Technology</b> Collaborative studies for the construction of databases and development of dictionary system for human genome analyses</p>	Slezak T (Lawrence Livermore National Laboratory, USA)	Katayama H		1996
<p>Technical cooperation for the construction of comprehensive cancer registration system in Osaka Prefecture</p>	Tsukuma H (Osaka Medical Center for Cancer and Cardiovascular Disease)	Katayama H		2005
<p>Research for health effects and dosimetry in Semipalatinsk nuclear test site</p>	Hoshi M (Research Institute for Radiation Biology and Medicine, Hiroshima University)	Katayama H		2005
<p>Measures for radiation emergency of nuclear power plants</p>	Kamiya K (Radiation Emergency Medicine Promotion Center, Hiroshima University)	Katayama H		2005
<p>Review of a system for the archival data on the medical examination of A-bomb survivors</p>	Sasaki H (Hiroshima Atomic Bomb Casualty Council)	Katayama H		2010
<p>Review of the system for medical examination</p>	Sasaki H (Hiroshima Atomic Bomb Casualty Council)	Katayama H		2010



## International Collaborative Activities

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

#### 1. World Health Organization (WHO)-related collaborative activities

RERF was designated as a collaborating center for radiation effects on humans by WHO in 1979, and has been designated as a member of the WHO Radiation Emergency Medical Preparedness and Assistance Network (REMPAN) since 1988. Dr. Toshiteru Okubo, RERF Chairman, Dr. Kazunori Kodama, Chief Scientist, Dr. Yoshiaki Kodama, Chief, Department of Genetics, Dr. Hiroaki Katayama, Chief, Department of Information Technology (ITD), and Dr. Masazumi Akahoshi, Chief, Department of Clinical Studies (Nagasaki), attended a WHO-REMPAN Collaborating Centers and Liaison Institutions program coordination conference held in Nagasaki University on February 16–18, 2011.

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

With support from the Nuclear Safety Commission, Dr. Kodama, Chief Scientist, attended an UNSCEAR meeting held on August 13–22, 2010, in Vienna, Austria. He also attended the UNSCEAR Japanese Committee meetings held on December 16, 2010, and March 3, 2011, in Tokyo.

Dr. Roy E. Shore, Vice Chairman and Chief of Research, attended a meeting of the UNSCEAR Working Group on Risk from Childhood Radiation Exposure held on February 4, 2011, in Bethesda, Maryland, U.S.A.

#### 3. International Commission on Radiological Protection (ICRP)

With support from the Radiation Effects Association, Dr. Nori Nakamura, Chief Scientist, attended an ICRP meeting held on December 22, 2010, in Tokyo.

#### 4. International Atomic Energy Agency (IAEA)

Dr. Kodama, Chief Scientist, visited the IAEA headquarters in Vienna, Austria, from March 4 to 14, 2011, to discuss collaboration between RERF and IAEA.

Dr. Y. Kodama, Chief, Department of Genetics, attended the National Institute of Radiological Sciences (NIRS) and IAEA's Workshop on Cytogenetic Biodosimetry for Asia in 2011 held on January 26–27, 2011, at NIRS in Chiba.

#### 5. U.S. National Council on Radiation Protection and Measurements (NCRP)

Dr. Shore, Vice Chairman and Chief of Research, attended the meetings of the NCRP Scientific Committee 1-16 on Uncertainties in Radiation Epidemiology Studies held on April 7–8, 2010, and January 31–February 1, 2011, in Bethesda, Maryland, U.S.A.

#### 6. Semipalatinsk-related collaborative activities

With the aim of participating in preliminary meetings on research arrangements and collecting information in

relation to the collaborative research with Hiroshima University's Research Institute for Radiation Biology and Medicine, Dr. Katayama, Chief, ITD, went to Kazakhstan from June 4 to 12 to visit the Kazakhstan Scientific Research Institute of Radiation Medicine and Ecology in Semipalatinsk. He also met with Dr. Polat Kazymbet, Director of the Radiobiology Scientific Centre, JSC Medical University of Astana, and Dr. Zhaksylyk Doskaliyev, Kazakh Public Health Minister.

#### 7. Other international collaborative activities

- 1) Dr. Shore, Vice Chairman and Chief of Research, Dr. Evan B. Duple, Associate Chief of Research, and Dr. Nakamura, Chief Scientist, attended the Annual Meeting of the U.S. Radiation Research Society held on September 25–29, 2010, in Maui, Hawaii, U.S.A., where Dr. Shore made a presentation at the Fetal Irradiation Risks Symposium.
- 2) Dr. Shore, Vice Chairman and Chief of Research, Dr. Duple, Associate Chief of Research, and Dr. Kodama, Chief Scientist, attended a symposium at the 52nd Annual Meeting of the American Society for Radiation Oncology held on October 31–November 4, 2010, in San Diego, California, U.S.A., where Dr. Shore presented a lecture on how RERF studies are helping radiation oncology patients and physicians.
- 3) Mr. Takanobu Teramoto, Permanent Director, and Mr. Hiroshi Haba, Group Leader, Public Relations and Publications Office, Secretariat, traveled to the U.S. from December 6 to 12 to visit the Salk Institute in San Diego, California, and the Fred Hutchinson Cancer Research Center in Seattle, Washington, with the aim of disseminating information on RERF research achievements and discussing effective public relations practice.

#### Acceptance of Visitors from Overseas for Briefing and Training

(Total in FY2010: 186 persons, excluding general visitors)

##### *Hiroshima: 174 persons*

#### Visitors related to Hiroshima International Council for Health Care of the Radiation-exposed (HICARE) (34 persons)

##### *1) South Korea-related (24 persons)*

A group of three members visited RERF on June 15, 2010, for short-term training on medical care for A-bomb survivors residing in South Korea. A training group of five nurses from the South Korean Red Cross came on November 18, 2010. A training group of 15 members from the Korean Atomic Energy Institute visited on December 1, 2010. A member of the Lingnan Medical University, Korea, came for training on January 18, 2011.

##### *2) Others (10 persons)*

One physician from the Health Science University of Mongolia traveled to RERF for training on July 28, 2010. One physician and one graduate researcher from Riga

Stradins University, Latvia, came for training from September 30 to December 3, 2010. Two physicians from the U.S. State of Hawaii Medical Association visited on October 22, 2010. Five physicians from Brazil and Los Angeles, U.S., came on February 10, 2011.

### Visitors related to Japan International Cooperation Agency (JICA) (53 persons)

#### 1) *Research Institute of Tuberculosis, Japan Anti-tuberculosis Association*

Thirteen trainees from Cambodia, Afghanistan, China, Iraq, Malawi, Myanmar, Pakistan, South Africa, Zambia, Zimbabwe, Japan, and Kenya visited RERF for the "Stop Tuberculosis Action Course" on July 7, 2010.

#### 2) *Pacific Resource Exchange Center*

Seventeen trainees from Indonesia, Thailand, China, Sri Lanka, El Salvador, Nicaragua, Saint Lucia, Uruguay, Turkey, Algeria, and Saudi Arabia visited RERF for a course on disaster emergency medical care on September 17, 2010.

#### 3) *University of Environmental and Occupational Health*

Four trainees from Malaysia visited for a medical course on occupational health and preventive medicine for workers on September 27, 2010.

#### 4) *Research Institute of Tuberculosis, Japan Anti-tuberculosis Association*

Nine trainees from Cambodia, Indonesia, Kenya, Myanmar, the Philippines, Zambia, Afghanistan, and Thailand visited for a group training course on stopping MDR-TB and HIV on October 27, 2010.

#### 5) *National Cancer Center*

Five trainees from Costa Rica, Uruguay, Nigeria, and Macedonia visited for a course on the newest cancer diagnostic and treatment methods on November 8, 2010.

#### 6) *National Cardiovascular Center*

Five trainees from Albania, Argentina, China, and Iraq visited for a FY2010 JICA group training course on cardiovascular disease countermeasures on November 8, 2010.

### Visitors related to RERF training program (2 persons)

One researcher from the National Cancer Center, South Korea, visited for training from January 16 to 29, 2011. One graduate student from the Medical Radiological Research Center of the Russian Academy, Russia, came for training from January 16 to February 26, 2011.

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

Eight trainees of Young Leaders' Program from Bangladesh, Cambodia, Malaysia, Mongolia, Thailand, Laos, Uzbekistan, and Vietnam (Healthcare Administration Course, Master's Degree Program at the Nagoya University Graduate School of Medicine) visited RERF on November 8, 2010.

### Others (77 persons)

Five students and professors from Indianapolis University, U.S.A., traveled to RERF on May 10, 2010. A group of 35 medical students from the International Federation of Medical Students Association's Hiroshima Summer School (including exchange students) visited on August 10, 2010. A group of 31 members of students and professors from the Tufts University's Institute for Global Leadership, U.S.A., came on January 5, 2011. A group of six members including students and professors from the State University of New York at Oswego, U.S.A., visited on March 6, 2011.

### Nagasaki: 12 persons

### Visitors related to Nagasaki Association for Hibakushas' Medical Care (NASHIM) (12 persons)

Six trainees for the NASHIM's FY2010 summer program from Russia, Ukraine, Belarus, and Kazakhstan traveled to the Nagasaki Laboratory on July 28, 2010. A team of four medical trainees for health care of A-bomb survivors visited from South Korea on February 25, 2011. A team of two medical trainees for health care of A-bomb survivors came from Brazil on March 3, 2011.

### List of Long-term Trainees (1 month or more)

#### September 30–December 3, 2010

Jolanta Cirule, physician, Institute of Occupational and Environmental Health, Riga Stradins University, Latvia  
Inese Martinsone, research assistant, Laboratory of Hygiene and Occupational Diseases, Riga Stradins University, Latvia

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

#### January 16–February 26, 2011

Evgeny Beketov, research scientist, Medical Radiological Research Center of the Russian Academy of Medical Sciences, Russia

Training on study of mechanisms of cell death induction by radiation using radiation resistant and sensitive cell lines, and study on effects of radiation exposure on immune function, at the Immunology Laboratory, Department of Radiobiology/Molecular Epidemiology.