

## 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

- ◆ Nakamura N: Atomic bombs and nuclear power stations. Chugoku Zeirishi Kaiho [Journal of Chugoku Certified Public Tax Accountants' Association] 2011 (July); (No.570):12–6. (Japanese)
- ◆ Nakamura N: Cancer risks following exposure to ionizing radiation. Surgery Frontier 2011 (December); 18(4):100–1. (Japanese)
- ◆ Nakamura N: Genetic effects of radiation. Nippon Rinsho [Japanese Journal of Clinical Medicine] 2012 (March); 70(3):457–460. (Japanese)
- ◆ Okubo T: Epidemiological studies: From experience in Hiroshima and Nagasaki to Fukushima. Igaku no Ayumi [Journal of Clinical and Experimental Medicine] 2011 (December); 239(10):995–1000. (Japanese)
- ◆ Okubo T: Radiation risk studies and radiation protection limits. Sanfujinka no Jissai [Obstetrical and Gynecological Practice] 2011 (December); 60(13):2055–61. (Japanese)

### Manuscripts in Press

- ⌘ Double EB, Boice JD: Seymour Jablon (June 2, 1918–April 9, 2012). Radiation Research 2012 (September); 178(3):246–7.
- ⌘ Okubo T: Long-term epidemiological studies of atomic bomb survivors in Hiroshima and Nagasaki: Study populations, dosimetry and summary of health effects. Radiation Protection Dosimetry.
- ⌘ Okubo T (Edit): MHLW Grants: FY2011 Report of Atomic Bomb Disease Research Project. (Japanese)

### Clinical Studies, Hiroshima

- ◆ 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-alfa-2b plus ribavirin therapy in Japanese patients infected with hepatitis C virus genotype 1b. Journal of Medical Virology 2011 (June); 83(6):981–8.
- ◆ Neriishi K, Monzen Y, Okamoto N: Radiation effects on pregnant women, fetuses, and children. Nippon Rinsho [Japanese Journal of Clinical Medicine] 2012 (March); 70(3):451–6. (Japanese)
- ◆ Ohishi W, Chayama K: Prevention of hepatitis B virus reactivation in immunosuppressive therapy or chemotherapy. Clinical and Experimental Nephrology 2011 (October); 15(5):634–40.

### Manuscript in Press

- ⌘ Usui S, Matsumura M, Yanagida J, Suyama A, Tatsukawa Y, Inoue N, Kidani Y, Egawa M, Kubota M, Nakahara H, Tsumura H, Okada T, Ishida K, Tojo T, Mukai M, Nakamoto K, Kotajima Y, Shinoda H, Fukuhara M, Kouno N, Yamaguchi N, Mori H: Report on the results of the eighteenth medical examination of atomic bomb survivors resident in North

America. Hiroshima Igaku [Journal of the Hiroshima Medical Association]. (Japanese)

### Clinical Studies, Nagasaki

- ◆ Hida A, Akahoshi M, Takagi Y, Imaizumi M, Sera N, Soda M, Maeda R, Nakashima E, Ida H, Kawakami A, Nakamura T, Eguchi K: Lipid infiltration in the parotid glands: A clinical manifestation of metabolic syndrome. Experimental and Clinical Endocrinology & Diabetes 2012 (February); 120(2):110–5. (RR 14-08)
- ◆ Imaizumi M: Radiation and thyroid carcinogenesis. Geka Chiryō [Surgical Therapy] 2011 (October); 105(4):364–9. (Japanese)
- ◆ Imaizumi M: Thyroid function in Hiroshima and Nagasaki atomic-bomb survivors. Kankyo Hormone Gakkai News Letter [Endocrine Disrupter News Letter] 2011 (October); 14(2):4. (Japanese)

### Genetics

#### Manuscript in Press

- ⌘ Shi L, Fujioka K, Sun J, Kinomura A, Inaba T, Ikura T, Ohtaki M, Yoshida MA, Kodama Y, Livingston G, Kamiya K, Tashiro S: A modified system for analyzing ionizing radiation-induced chromosome abnormalities. Radiation Research.

### Radiobiology/Molecular Epidemiology

- ◆ Sonoyama T, Sakai A, Mita Y, Yasuda Y, Kawamoto H, Yagi T, Yoshioka M, Mimura T, Nakachi K, Ouchida M, Yamamoto K, Shimizu K: TP53 codon 72 polymorphism is associated with pancreatic cancer risk in males, smokers and drinkers. Molecular Medicine Reports 2011 (May–June); 4(3):489–95.

### Manuscripts in Press

- ⌘ Fujiki H, Imai K, Nakachi K, Shimizu M, Moriwaki H, Suganuma M: Challenging the effectiveness of green tea in primary and tertiary cancer prevention. Journal of Cancer Research and Clinical Oncology.
- ⌘ Watanabe T, Kuramochi H, Takahashi A, Imai K, Katsuta N, Nakayama T, Fujiki H, Suganuma M: Higher cell stiffness indicating lower metastatic potential in B16 melanoma cell variants and in (-)-epigallocatechin gallate-treated cells. Journal of Cancer Research and Clinical Oncology.

### Epidemiology, Hiroshima

- ◆ Pham TM, Kubo T, Fujino Y, Ozasa K, Matsuda S, Yoshimura T: Disability-adjusted life years (DALY) for cancer in Japan in 2000. Journal of Epidemiology 2011 (May); 21(4):309–12.

### Manuscript in Press

- ⌘ Sakata R, Kleinerman RA, Mabuchi K, Stovall M, Smith SA, Wactawski-Wende J, Cookfair DL, Boice JD, Inskip PD:

Cancer mortality following radiotherapy for benign gynecologic disorders. Radiation Research.

### Information Technology

#### Manuscript in Press

⌘ Katayama H: RERF databases and implications for future studies. Radiation Protection Dosimetry.

## 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

❖ Nakamura N. How radiation exposure increased the risk of leukemia among atomic-bomb survivors? 18th International Congress of Dentomaxillofacial Radiology, 25–29 May 2011, Hiroshima

❖ Double EB, Fujiwara S, Kusunoki Y, Grant EJ, Kodama Y, Takahashi N, Katayama H, Suyama A, Shore RE. The use of unique archived data and biological samples by the Radiation Effects Research Foundation. 14th International Congress of Radiation Research, 28 August–1 September 2011, Warsaw, Poland

❖ Shore RE. Study of cataract prevalence in Chernobyl clean-up workers. Exploratory Workshop on Radiation-Induced Lens Opacities Resulting from Low Dose Exposure, 20–23 September 2011, Bombon, France

❖ Okubo T. Workers health of responders to nuclear crisis—Steps after urgent countermeasures. International Symposium of University of Occupational Environmental and Health, 8–9 November 2011, Kitakyushu

### Radiobiology/Molecular Epidemiology

❖ Yamasaki K, Takahashi N. Aid for evacuees to Yamagata Prefecture due to the Fukushima nuclear power plant accident. 52nd Late A-bomb Effects Research Meeting, 5 June 2011, Hiroshima

### Epidemiology, Hiroshima

❖ Ozasa K, Washio M, Fukushima W, Oofuji S. Advocacy of the prevention and control of influenza by vaccination. 70th Annual Meeting of the Japanese Society of Public Health, 19–21 October 2011, Akita

### Statistics

❖ Cullings HM. Dose reconstruction and dose uncertainty issues for members of the public living in areas affected by the Fukushima nuclear power plant accident. Kurume International Biostatistics Forum, 30 July 2011, Kurume

❖ Abbott RD. Life-style and longevity: Contributions from the Honolulu Heart Program. 76th Annual Meeting of the Japanese Circulation Society, 16 March 2012, Fukuoka

### Information Technology

❖ Katayama H, Ioka A, Tsukuma H. Use of GIS in narrowing down the areas to be targeted for the medical examination for breast cancer. 33rd Annual Meeting of the International Association of Cancer Registries, 11–13 October 2011, Balaclava, Mauritius

## Scientific Lectures and Seminars Presented at RERF

1 April 2011–31 March 2012

*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.*

22 April 2011, **Eiji Nakashima**, Assistant Chief, Department of Statistics, Radiation Effects Research Foundation, The 263rd Hiroshima Statistics Study Group: “Cataract study update and an analysis of cortical cataract octant data in atomic-bomb survivors”

19 May 2011, **Eeva K Salminen**, Professor, University of Turku, and Chief Physician, Turku University Hospital, Finland: “The European DoReMi and Melodi Research Programs on low-dose medical irradiation”

27 May 2011, **Yasunori Fujikoshi**, Emeritus Professor of Hiroshima University and Visiting Professor of Chuo University, The 264th Hiroshima Statistics Study Group: “High-dimensional asymptotic distributions of characteristic roots and vectors in discriminant analysis and canonical correlation analysis”

16 June 2011, **Mitchell S. Turker**, Professor, Molecular and Medical Genetics, Oregon Health & Sciences University, U.S.A. (Jefferson Science Fellow, U.S. Department of State): “Genomic effects of charged particle radiation: Instability or catastrophe?”

1 July 2011, **Hirofumi Wakaki**, Professor, Department of Mathematics, Graduate School of Science, Hiroshima University, The 265th Hiroshima Statistics Study Group: “Computable error bounds for asymptotic expansions formulas of distributions related to gamma functions”

15 September 2011, **Andre Bouville**, Former head of the Radiation Dosimetry Unit of the Radiation Epidemiology Branch, U.S. National Cancer Institute: “Radiation doses and risks resulting from nuclear weapons tests conducted in the Marshall Islands”

30 September 2011, **Wan-Ling Hsu**, Research Scientist, Department of Statistics, Radiation Effects Research Foundation, The 266th Hiroshima Statistics Study Group: “Mediating role of chronic inflammation in cancer risk for smoking and radiation”

4 November 2011, **Yoshiyuki Ninomiya**, Associate Professor, Division of Applied Mathematics, Institute of Mathematics for Industry, Kyushu University, The 267th Hiroshima Statistics Study Group: “A p-value evaluation for multiple testing problem based on highly correlated test statistics”

28 November 2011, **Marcel R. M. van den Brink**, Head, Division of Hematologic Oncology, Memorial Sloan-Kettering Cancer Center, U.S.A.: “Strategies to enhance T cell reconstitution”

2 December 2011, **Tetsuro Sakurai**, Assistant Professor, Master’s Program in Systems Management, Graduate

School of Business Sciences, University of Tsukuba, The 268th Hiroshima Statistics Study Group: “High-dimensional data analysis in MANOVA and discriminant analysis”

16 December 2011, **Takashi Gojobori**, Vice-Director, National Institute of Genetics and Professor, Center for Information Biology and DNA Data Bank of Japan (DDBJ): “Progress of genome studies using a next generation sequencer”

20 January 2012, **Keiji Ogura**, Research Scientist, Department of Radiobiology, Advanced Molecular Bio-Sciences Research Center, Institute for Environmental Science: “Genomic aberrations in the progeny of male exposed to chronic low-dose-rate gamma-ray”

## REF Colloquia (FY2011)

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

22 April 2011, **John B. Cologne**, Research Scientist, Department of Statistics: “Multiphase analysis of case-cohort data in the RME ‘Cancer/Immunogene Study (RP 4-04)’”

27 May 2011, **Jun-ichi Asakawa**, Research Scientist, Department of Genetics: “Detection of genomic copy number variations with HD-microarray CGH analyses: A feasibility study for genetic risk estimates of radiation”

8 July 2011, **Tomonori Hayashi**, Assistant Department Chief, Department of Radiobiology/Molecular Epidemiology: “Study on influenza vaccination effectiveness in A-bomb survivors: Results from a pilot study and future plans”

19 August 2011, **Yoshimi Tatsukawa**, Associate Senior Scientist, Department of Clinical Studies: “Heritable effects for prevalence of individual multi-factorial diseases: Clinical study of offspring of the atomic-bomb survivors”

14 October 2011, **Kotaro Ozasa**, Chief, Department of Epidemiology: “Risks of cancer and noncancer diseases in the LSS, 1950–2003”

11 November 2011, **Robert D. Abbott**, Senior Research Scientist, Department of Statistics: “Moderate Physical Activity and Longevity: Observations from the Honolulu-Asia Aging Study”

22 December 2011, **Yasunari Satoh**, Research Scientist, Department of Genetics: “Summary of Copy Number Variations (CNVs) observed in a Japanese population by BAC-array-CGH”

20 January 2012, **Kiyohiro Hamatani**, Chief, Laboratory of Cell Biology, Department of Radiobiology/Molecular Epidemiology: “Molecular characteristics identified to this point, and issues to be clarified in the future, regarding papillary thyroid cancer among A-bomb survivors”

## Awards Received by REF Employees

**1 April 2011–31 March 2012**

**Takahiro Tsuji**, Assistant Chief of Technicians, Biochemical Genetics Laboratory, Department of Genetics, and **Hidetoshi Tominaga**, Senior Technician, Division of Clinical Laboratories, Department of Clinical Studies, Hiroshima, each received the FY2011 Hiroshima Prefectural Award for Distinguished Hazardous Materials Officer.

## FY2011 External Research Funds

Name of Outside Organization	Number of Grants	Actual Amounts of Funding Total
Ministry of Health, Labour and Welfare (MHLW)	12	¥14,400,000
Ministry of Education, Culture, Sports, Science and Technology (MEXT)	11	¥26,520,000
National Center for Geriatrics and Gerontology	1	¥5,500,000
Japan Arteriosclerosis Prevention Fund	1	¥2,000,000
National Cancer Center	1	¥1,255,000
Princess Takamatsu Cancer Research Fund	1	¥2,000,000
Japan Chemical Industry Association	1	¥5,000,000
Japan Osteoporosis Foundation	1	¥800,000
National Institute of Radiological Sciences	1	Supplies only
U.S. National Cancer Institute (NCI) Contract	1	¥20,469,765
U.S. National Institute of Allergy and Infectious Diseases	1	¥179,325,391
Grand Total	32	¥257,270,156

Notes) · This amount includes indirect cost.

· These amounts may include subsidies allocated to collaborators.

· 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.

## FY2011 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 2011– 31 March 2012</p>	<p>¥3,500,000</p>
<p>Development of indices for assessment of motor disorders and prevention of conditions requiring nursing care as well as research into effective intervention methods</p>	<p>MHLW Scientific Research Grant Comprehensive Research on Aging and Health Toru Akune, Special Contract Associate Professor, The University of Tokyo Hospital</p>	<p>Saeko Fujiwara</p>	<p>1 April 2011– 31 March 2012</p>	<p>¥1,500,000</p>
<p>Study of motor disturbances in the elderly and development of new related geriatric treatments</p>	<p>National Center for Geriatrics and Gerontology (NCGG) Funds for Research and Technological Development for Longevity Healthcare Atushi Harada, Department Chief, Hospital, NCGG</p>	<p>Saeko Fujiwara</p>	<p>1 April 2011– 31 March 2012</p>	<p>¥5,500,000</p>
<p>Countermeasures against osteoporosis with the aim of effectively reducing the number of those requiring nursing care</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 2011– 31 March 2012</p>	<p>¥1,000,000</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 2011– 31 March 2012</p>	<p>¥1,150,000</p>
<p>Understanding risk-factor management priorities and establishing individual risk-assessment evidence through development of large-scale cohort-based collaborative studies</p>	<p>MHLW Scientific Research Grant Comprehensive Research on Lifestyle-related Diseases including Cardiovascular Diseases and Diabetes Mellitus Tomonori Okamura, Professor, School of Medicine, Keio University</p>	<p>Michiko Yamada</p>	<p>1 April 2011– 31 March 2012</p>	<p>¥1,850,000</p>
<p>Atherosclerosis, dementia and ADL evaluations among the Adult Health Study subjects</p>	<p>Scientific Research Grant Japan Arteriosclerosis Prevention Fund Chief of Research Group: Hirotsugu Ueshima, Special Contract Professor, Lifestyle-related Disease Prevention Center, Shiga University of Medical Science Principal Investigator: Michiko Yamada, Chief, Division of Health Examinations, Department of Clinical Studies, RERF</p>	<p>Saeko Fujiwara</p>	<p>1 April 2011– 31 March 2012</p>	<p>¥2,000,000 The above amount includes funds allocated to the collaborator(s) at Hiroshima University.</p>



## FY2011 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 prospective cohort study of factors contributing to accelerate the progress of fatty liver disease</p>	<p>MEXT Grant-in-Aid for Scientific Research Scientific Research (C) Waka Ohishi, Assistant Chief, Department of Clinical Studies, RERF</p>		<p>1 April 2011– 31 March 2012</p>	<p>Direct cost ¥2,000,000 Indirect cost ¥600,000</p>
<p>The effect of radiation dose on body composition and the association with atherosclerotic diseases</p>	<p>MEXT Grant-in-Aid for Scientific Research Young Scientists (B) Yoshimi Tatsukawa, Associate Senior Scientist, Division of Health Examinations, Department of Clinical Studies, RERF</p>		<p>1 April 2011– 31 March 2012</p>	<p>Direct cost ¥700,000 Indirect cost ¥210,000</p>
<p>Study of atherosclerotic disease and bone fracture risk among the elderly—Hiroshima cohort survey</p>	<p>Japan Osteoporosis Foundation Lily Scientific Research Fund Ikuno Takahashi, Research Scientist, Division of Health Examinations, Department of Clinical Studies, RERF</p>		<p>1 January 2012– 31 December 2012</p>	<p>¥800,000</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 Research on Intractable Diseases Naomasa Makita, Professor, Nagasaki University Graduate School of Biomedical Sciences</p>	<p>Masazumi Akahoshi</p>	<p>1 April 2011– 31 March 2012</p>	<p>¥900,000</p>
<p><b>Department of Genetics</b> Establishment of cytogenetic study network for radiation accident</p>	<p>Chromosome Network Committee, National Institute of Radiological Sciences (NIRS) Yumiko Suto, Head, Biodosimetry Section, Department of Radiation Dosimetry, Research Center for Radiation Emergency Medicine, NIRS</p>	<p>Yoshiaki Kodama</p>	<p>15 June 2011– 14 June 2012</p>	<p>Expenses for supplies (¥300,000 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 Noda</p>	<p>1 April 2011– 31 March 2012</p>	<p>Direct cost ¥1,900,000 Indirect cost ¥570,000</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 2011– 31 March 2012</p>	<p>Direct cost ¥500,000 Indirect cost ¥150,000</p>
<p>Study of genetic effects of atomic-bomb radiation using high-density microarray CGH</p>	<p>MEXT Grant-in-Aid for Scientific Research Scientific Research (B) Mieko Kodaira, Chief, Biochemical Genetics Laboratory, Department of Genetics, RERF</p>	<p>Jun-ichi Asakawa Kyoji Furukawa (Department of Statistics) Nori Nakamura (Chief Scientist)</p>	<p>1 April 2011– 31 March 2012</p>	<p>Direct cost ¥5,600,000 Indirect cost ¥1,680,000</p>

## FY2011 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 Genetics</b> Evaluation of the skin cancer risk among heterozygotes bearing a founder mutation allele unique to a Japanese population at xeroderma pigmentosum group A (XPA) gene</p>	<p>MEXT Grant-in-Aid for Scientific Research Scientific Research (C) Yuko Hirai, Chief, Cytogenetics Laboratory, Department of Genetics, RERF</p>	<p>Yoshiaki Kodama Nori Nakamura (Chief Scientist)</p>	<p>1 April 2011– 31 March 2012</p>	<p>Direct cost ¥1,600,000 Indirect cost ¥480,000</p>
<p>Development of recombinant mouse systems for <i>in situ</i> measuring somatic and germ line mutations</p>	<p>Long-range Research Initiative Japan Chemical Industry Association Asao Noda, Assistant Chief, Department of Genetics, RERF</p>	<p>Kanya Hamasaki Yuko Hirai Yoshiaki Kodama Nori Nakamura (Chief Scientist)</p>	<p>1 September 2011– 31 August 2012</p>	<p>¥5,000,000</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>U.S. 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) Seishi Kyoizumi Kazue Imai Reiko Ito Junko Kajimura Kengo Yoshida 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 ¥154,720,084 Indirect cost ¥24,605,307</p>
<p>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 2011– 31 March 2012</p>	<p>Direct cost ¥3,700,000 Indirect cost ¥1,110,000</p>



## FY2011 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 oncological study on lung cancer among A-bomb survivors</p>	<p>MEXT Grant-in-Aid for Scientific Research Young Scientists (B) Masataka Taga, Research Scientist, Cell Biology Laboratory, Department of Radiobiology/Molecular Epidemiology, RERF</p>		<p>1 April 2011– 31 March 2012</p>	<p>Direct cost ¥900,000 Indirect cost ¥270,000</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 Third Term Comprehensive Control Research for Cancer 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 2011– 31 March 2012</p>	<p>¥2,500,000</p>
<p>Molecular mechanisms on radiation carcinogenesis—colon cancer and papillary thyroid cancer among A-bomb survivors</p>	<p>Research Grants 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 2011– 31 March 2012</p>	<p>¥2,000,000</p>
<p><b>Department of Epidemiology, Hiroshima</b> Immunohistological epidemiologic study of breast cancer among atomic-bomb survivors</p>	<p>MEXT Grant-in-Aid for Scientific Research Scientific Research (C) Kotaro Ozasa, Chief, Department of Epidemiology, RERF</p>		<p>1 April 2011– 31 March 2012</p>	<p>Direct cost ¥2,600,000 Indirect cost ¥780,000</p>
<p>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 2011– 31 March 2012</p>	<p>Since this person is an associate investigator, research funds were not allocated to him.</p>
<p>Study on the molecular mechanism of carcinogenesis due to radiation exposure</p>	<p>Funds for Cancer-related Research and Technology Development National Cancer Center Shunichi Yamashita, Professor, Department of Molecular Medicine, Atomic Bomb Disease Institute, Nagasaki University Graduate School of Biomedical Sciences</p>	<p>Kotaro Ozasa</p>	<p>1 April 2011– 31 March 2012</p>	<p>¥1,255,000</p>

## FY2011 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> Analytical epidemiologic study of effectiveness, safety, and other aspects of vaccination</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 2011– 31 March 2012</p>	<p>¥700,000</p>
<p>Research on the current status of cancer incidence/mortality trends</p>	<p>MHLW Scientific Research Grant Third Term Comprehensive Control Research for Cancer Tomotaka Sobue, Professor, Graduate School of Medicine, Osaka University</p>	<p>Hiroimi Sugiyama Cooperative Investigator: Hiroaki Katayama (Department of Information Technology)</p>	<p>1 April 2011– 31 March 2012</p>	<p>¥650,000</p>
<p><b>Department of Epidemiology, Nagasaki</b> Empirical study on methods for evaluation of progress in cancer measures on the basis of existing statistical data</p>	<p>MHLW Scientific Research Grant Clinical Cancer Research Hideaki Tsukuma, Chief, Department of Cancer Control and Statistics, Osaka Medical Center for Cancer and Cardiovascular Diseases</p>	<p>Cooperative Investigator: Midori Soda</p>	<p>1 April 2011– 31 March 2012</p>	<p>Since this person is a cooperative investigator, no direct costs were allocated to her. However, this investigator's necessary expenses (equivalent to ¥300,000) were paid by the P.I.</p>
<p>Research on the current status of cancer incidence/mortality trends</p>	<p>MHLW Scientific Research Grant Third Term Comprehensive Control Research for Cancer Tomotaka Sobue, Professor, Graduate School of Medicine, Osaka University</p>	<p>Midori Soda Cooperative Investigator: Hiroaki Katayama (Department of Information Technology)</p>	<p>1 April 2011– 31 March 2012</p>	<p>¥650,000</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 2011– 31 March 2012</p>	<p>Direct cost ¥900,000 Indirect cost ¥270,000</p>

## FY2011 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
<b>Other Office</b> Support for epidemiological studies of cancer among atomic-bomb survivors	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, RERF	Evan B. Douple (Associate Chief of Research) Nori Nakamura (Chief Scientist) Shoji Tokuoka (RERF Consultant) 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)	1 December 2008– 30 November 2013	Direct cost ¥17,733,019 Indirect cost ¥7,749,323
<b>Grand Total</b>				¥257,270,156

## FY 2011 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	Fujiwara S	Kasagi F (Radiation Effects Association) 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) 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 University) Kitaoka T (Nagasaki University) Neriishi K (Yachiyo Hospital)	2000
A nested case-control study of breast and endometrial cancer in the cohort of Japanese atomic-bomb survivors	Ohishi W	Grant EJ (Department of Epidemiology) Cologne JB (Department of Statistics) Nakachi K (RERF Consultant and Project Principal Scientist) Nakashima E (Department of Statistics) Fujiwara S Akahoshi M (Department of Clinical Studies, Nagasaki)	Neriishi K (Yachiyo Hospital) Sharp GB (National Institute of Allergy and Infectious Diseases, USA) Eguchi H (Saltama Medical University) Izumi S (Oita University) Key TJ (Imperial Cancer Research Fund, UK) Stevens RG (University of Connecticut Health Center, USA) 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) 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 University) Kitaoka T (Nagasaki University) Neriishi K (Yachiyo Hospital)	2002

## FY 2011 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</b> 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
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	Fujiwara S	Cullings HM (Department of Statistics) Ohishi W Hayashi T (Department of Radiobiology/ Molecular Epidemiology) Akahoshi M (Department of Clinical Studies, Nagasaki)	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	Fujiwara S	Ohishi W Akahoshi M (Department of Clinical Studies, Nagasaki) Cologne JB (Department of Statistics)		2005
Glaucoma study in atomic-bomb survivors	Kiuchi Y (Hiroshima University)	Nakashima E (Department of Statistics) Hida A (Department of Clinical Studies, Nagasaki) Fujiwara S Akahoshi M (Department of Clinical Studies, Nagasaki)	Yokoyama T (Hiroshima University) Uematsu M (Nagasaki University) Tsuiki E (Nagasaki University) Kitaoka T (Nagasaki University) Neriishi K (Yachiyo Hospital)	2005
Inflammation and cancer incidence in atomic-bomb survivors	Tatsukawa Y	Hsu WL (Department of Statistics) Nakashima E (Department of Statistics) Soda M (Department of Epidemiology, Nagasaki) Yamada M Fujiwara S Cologne JB (Department of Statistics) Akahoshi M (Department of Clinical Studies, Nagasaki)	Neriishi K (Yachiyo Hospital) Little MP (U.S. National Institutes of Health) Nishi N (National Institute of Health and Nutrition)	2005

## FY 2011 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> Assessment of statistical methods for intermediate risk factors in noncancer disease and mortality</p>	<p>William L. (University of Washington, USA)</p>	<p>Hsu WL (Department of Statistics) Takahashi I (Department of Statistics) Cologne JB (Department of Statistics) Fujiwara S (Department of Clinical Studies, Nagasaki) Kodama K (Chief Scientist)</p>	<p>Kopecy KJ (University of Washington, Fred Hutchinson Cancer Research Center, USA) Davis S (University of Washington, Fred Hutchinson Cancer Research Center, USA)</p>	2006
<p>Risk factors and modifiers related to clustering of noncancer disease in the AHS: Analysis using statistical data mining techniques</p>	<p>Kakuma T (Kurume University)</p>	<p>Cologne JB (Department of Statistics) Furukawa K (Department of Statistics) Hsu WL (Department of Statistics) Yamada M (Chief Scientist) Kodama K (Department of Epidemiology, Nagasaki) Akahoshi M (Department of Clinical Studies, Nagasaki) Fujiwara S</p>		2006
<p>Body mass index (BMI) and mortality</p>	<p>Thun M (American Cancer Society)</p>	<p>Ohishi W (Department of Clinical Studies, Nagasaki) Hida A (Department of Clinical Studies, Nagasaki) Shore RE (Vice Chairman)</p>		2008
<p>Investigation of storage conditions for cataract tissue of A-bomb survivors, and its collection and storage program</p>	<p>Hida A</p>	<p>Tatsukawa Y (Department of Statistics) Nakashima E (Department of Statistics) Ohishi W (Department of Clinical Studies, Nagasaki) Fujiwara S (Department of Radiobiology/Molecular Epidemiology) Akahoshi M (Department of Radiobiology/Molecular Epidemiology) Hayashi T (Department of Radiobiology/Molecular Epidemiology) Ito R (Department of Radiobiology/Molecular Epidemiology) Nakachi K (RERF Consultant and Project Principal Scientist)</p>	<p>Neriishi K (Yachiyo Hospital) 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)</p>	2008



## FY 2011 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>	Takahashi I	Abbott RD (Department of Statistics) 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) Itakura K (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) Neriishi K (Yachiyo Hospital)	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 (Radiation Effects Association)	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 Imaizumi 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 Imaizumi 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) Akahoshi M		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)	Imaizumi M	Gussekloo J (Leiden University Medical Center, Netherlands)	2008

## FY 2011 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, Nagasaki</b> 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
The incidence and prognostic value of the early repolarization electrocardiogram pattern	Haruta D (Nagasaki University)	Nakashima E (Department of Statistics) Akahoshi M	Tsuneto A (Nagasaki University)	2008
The association between chronic kidney disease and cardiovascular disease among atomic-bomb survivors	Tsuneto A (Nagasaki University)	Takahashi I (Department of Clinical Studies, Hiroshima) Hida A Sera N Imaizumi M Yamada M (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	Neriishi K (Yachiyo Hospital)	2009
Study on the genetic background of short QT	Makita N (Nagasaki University)	Akahoshi M Fujiwara S (Department of Clinical Studies, Hiroshima)	Haruta D (Nagasaki University) Maemura K (Nagasaki University)	2011
Study for the epidemiological and genetic basis of progressive cardiac conduction defect	Makita N (Nagasaki University)	Akahoshi M Fujiwara S (Department of Clinical Studies, Hiroshima) Nakashima E (Department of Statistics)	Haruta D (Nagasaki University) Maemura K (Nagasaki University)	2012

## FY 2011 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, Nagasaki</b> Weight fluctuation and cancer and cardiovascular disease incidence and mortality in Japanese	Nanri A (National Center for Global Health and Medicine)	Sera N Takahashi I (Department of Clinical Studies, Hiroshima) Soda M (Department of Epidemiology, Nagasaki) Suyama A (Department of Epidemiology, Nagasaki) Ozasa K (Department of Epidemiology) Cologne JB (Department of Statistics) Hsu WL (Department of Statistics) Cullings HM (Department of Statistics) Fujiwara S (Department of Clinical Studies, Hiroshima) Akahoshi M	Mizoue T (National Center for Global Health and Medicine) Araki Y (Kurume University)	2012
<b>Department of Genetics</b> Molecular alterations in early-onset breast and ovarian cancers among atomic-bomb survivors	Mabuchi K (U.S. National Cancer Institute) Land CE (U.S. National Cancer Institute)	Hirai Y		2001
Mutation detection in rat oocytes	Kamiguchi Y (Asahikawa Medical College)	Asakawa J		2003
Pluralistic characterization for genome information about cardiovascular diseases such as hypertension, and development of epoch-making methods for either diagnosis or therapy	Morisaki T (National Cardiovascular Center)	Takahashi N (Department of Radiobiology/Molecular Epidemiology)		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

## FY 2011 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> Establishment of a recombinant mouse model for assessment of genetic effects of radiation at low doses</p> <p>Estimation of genetic effects of radiation in male germ cells of mice: Study for assessment of high-density microarray CGH platform</p> <p>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</p> <p>Pilot study of trans-generational effects of atomic-bomb radiation using a high-density array system to detect copy number variants</p>	<p>Mitani H (The University of Tokyo Graduate School)</p> <p>Shimada Y (National Institute of Radiological Sciences)</p> <p>Mabuchi K (U.S. National Cancer Institute) Kraemer KH (U.S. National Cancer Institute)</p> <p>Nishida N (The University of Tokyo) Tokunaga K (The University of Tokyo)</p>	<p>Noda A</p> <p>Asakawa J</p> <p>Hirai Y Nakamura N (Chief Scientist)</p> <p>Takahashi N (Department of Radiobiology/Molecular Epidemiology) Sato H</p>		<p>2009</p> <p>2009</p> <p>2009</p> <p>2010</p>
<p>Study of radiation-induced circulatory diseases using animal models</p>	<p>Kokubo T (National Institute of Radiological Sciences) Inaba T (Research Institute for Radiation Biology and Medicine, Hiroshima University)</p>	<p>Takahashi N (Department of Radiobiology/Molecular Epidemiology) Niwa Y (Department of Radiobiology/Molecular Epidemiology)</p>		2011
<p><b>Department of Radiobiology/Molecular Epidemiology</b> Study on gene alterations and genetic susceptibility in sporadic lung carcinogenesis (SNP)</p> <p>Study on gene alterations and expression in sporadic lung carcinogenesis</p>	<p>Shimizu K (Okayama University)</p> <p>Sueoka E (Saga University) Aragane N (Saga University)</p>	<p>Nakachi K (RERF Consultant and Project Principal Scientist) Hayashi T Yoshida K Imai K</p> <p>Nakachi K (RERF Consultant and Project Principal Scientist) Hayashi T Yoshida K Imai K</p>		<p>2002</p> <p>2002</p>

## FY 2011 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> 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	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 (Hiroshima City Asa Hospital)	2002
Study on the cytotoxic 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
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) Trosko JE (Michigan State University, USA)	1998
Analyses of <i>TCK</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

## FY 2011 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> 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
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



## FY 2011 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 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) Hayashi I (Hiroshima University)	2002
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

## FY 2011 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> Comparison of liver cancer risks between Thorotrast-admitted patients and A-bomb survivors in Japan</p>	<p>Mori T (National Institute of Radiological Sciences)</p>	<p>Shimizu Y (Part-time Professional) Cologne JB (Department of Statistics) Cullings HM (Department of Statistics) Tokuoka S (RERF Consultant)</p>	<p>2001</p>	
<p>Task group of epidemiology on radiological protection standard</p>	<p>Sakata R</p>		<p>Kasagi F (Radiation Effects Association) 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)</p>	<p>2005</p>
<p>Second cancer risk after radiation therapy among A-bomb survivors</p>	<p>Yoshinaga S (National Institute of Radiological Sciences)</p>	<p>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)</p>	<p>2007</p>	

## FY 2011 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> 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 Suyama A (Department of Epidemiology, Nagasaki) Kodama K (Chief Scientist)	McGale P (University of Oxford, UK) Boreham J (University of Oxford, UK) Peto R (University of Oxford, UK)	2007
Confounding or interaction of anthropometric factors with radiation on colon cancer incidence in the Life Span Study (LSS)	Simmens E (University of Washington, USA)	Grant EJ Sugiyama H Moriwaki H Sakata R Soda M (Department of Epidemiology, Nagasaki) 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) Kasagi F (Radiation Effects Association) 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 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)	Mabuchi K (U.S. National Cancer Institute) Chow WH (U.S. National Cancer Institute) Kasagi F (Radiation Effects Association) Nishi N (National Institute of Health and Nutrition)	2008

## FY 2011 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) Suyama A (Department of Epidemiology, Nagasaki) Sakata R Fujiwara S (Department of Clinical Studies) Akahoshi M (Department of Clinical Studies, Nagasaki)	Kasagi F (Radiation Effects Association)	2008
Second collaborative analysis of radiation-associated thyroid cancers	Sakata R	Shore RE (Vice Chairman)	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, Project 2: BMI and total mortality (Phase II), Project 3: Body mass index and risk of intermediate and low rate cancers in Asia populations, Project 4: Diet and mortality among Asians	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)		2010
Thyroid tumor incidence among the RERF LSS cohort	Mabuchi K (U.S. National Cancer Institute)	Tokuoka S (RERF Consultant) Sakata R Furukawa K (Department of Statistics) Funamoto S (Department of Statistics)	Preston DL (Hirosoft International, USA) Hayashi Y (Geriatric Health Services Facility "Hidamari") Tsuda N (Nagasaki Health Promotion Corporation)	2009
<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
Relationship between radiotherapy facilities and breast cancer survival: Database linkage study in Nagasaki	Ono Y (Osaka University)	Suyama A Soda M		2008

## FY 2011 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 Misumi M		2007
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 on gastrointestinal cancers (DNA methylation, etc.)	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 2011 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> Bio-dosimeters as instrumental variables for assessing and dealing with uncertainty in atomic-bomb survivor dose estimates: Preliminary evaluation in the AHS sub-cohort</p>	Carter R (The State University of New York at Buffalo, USA)	Cullings HM Kodama K (Chief Scientist) Kusunoki Y (Department of Radiobiology/Molecular Epidemiology) Nakamura N (Chief Scientist) Ozasa K (Department of Epidemiology) Imazumi M (Department of Clinical Studies, Nagasaki) Cologne JB Nakashima E Misumi M Funamoto S Douple EB (Associate Chief of Research)	Miller A (The State University of New York at Buffalo, USA) Tekwe C (The State University of New York at Buffalo, USA) Neriishi K (Yachiyo Hospital) Stram D (University of Southern California, USA)	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)		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 (U.S. National Institutes of Health)	Cullings HM Furukawa K Soda M (Department of Epidemiology, Nagasaki) Suyama A (Department of Epidemiology, Nagasaki) Sakata R (Department of Epidemiology)	Nishi N (National Institute of Health and Nutrition) Kasagi F (Radiation Effects Association) Molitor J (University of Southern California, USA)	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



## FY 2011 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> 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) Funamoto S	Kasagi F (Radiation Effects Association)	2004
Application of causal modeling on radiation, inflammation, and selected radiation/inflammation-induced health outcomes	Hsu WL	Nakashima E Sakata R (Department of Epidemiology) Takahashi I (Department of Clinical Studies) Yamada M (Department of Clinical Studies) Fujiwara S (Department of Clinical Studies)	Neriishi K (Yachiyo Hospital) Kakuma T (Kurume University) Araki Y (Kurume University)	2007
Thermoluminescent dosimetry of gamma dose to tiles and bricks	Maryama 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.	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)	Mabuchi K (U.S. National Cancer Institute) Egawa H (Hiroshima City Asa Hospital) Yonehara S (JA Onomichi General Hospital) Matsuo T (Nagasaki Health Promotion Corporation)	2006

## FY 2011 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> Study of arteriosclerosis in AHS population (Part 1. Physiological indices of arteriosclerosis)</p>	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
<p>A semi-parametric survival extrapolation method: Model validation using RERF cohort</p>	Fang CT (Taiwan University)	Hsu WL Furukawa K Cullings HM 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) Kasagi F (Radiation Effects Association)	2009
<p>Application of casual modeling on radiation, inflammation, and cataract surgery among AHS population</p>	Kakuma T (Kurume University) Hsu WL	Nakashima E	Araki Y (Kurume University) Neriishi K (Yachiyo Hospital)	2009
<p>Cohort study on weight fluctuation and cancer and cardiovascular disease incidence and mortality</p>	Nanri A (Research Institute, International Medical Center of Japan) Mizoue T (Research Institute, International Medical Center of Japan) Cologne JB	Akahoshi M (Department of Clinical Studies, Nagasaki) Soda M (Department of Epidemiology, Nagasaki) Cologne JB	Araki Y (Kurume University)	2009
<p>Methods for assessing joint effects of radiation and intermediate risk factors in nested case-control studies</p>	Cologne JB	Furukawa K Hsu WL Grant EJ (Department of Epidemiology) Ohishi W (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) Fuji Y (Miyazaki University) Izumi S (Oita University) Kopecky KJ (University of Washington, USA) Neriishi K (Yachiyo Hospital)	2008

## FY 2011 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> Study on estimability of waist circumference and its application to risk analysis for metabolic syndrome</p>	Nakamura T (Nagasaki University)	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	Ishida N (Preventive Clinical Lab. Co. Ltd.)	2008
<p>Cancer risk estimation after acute radiation exposure: Impacts of the neutron dose and non-parametric analysis of risk coefficients</p>	Cullings HM		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)	2008
<p>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

## International Collaborative Activities

### Participation in International Collaborative Activities by RERF Directors and Staff Members

#### 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 in fiscal 2007, and was then entrusted to the Hiroshima prefectural government and subsequently to the Hiroshima Prefecture Medical Association. In the 18th cycle of the project, conducted in fiscal 2011, the 1st team visited Los Angeles and Honolulu on June 15–29, 2011, and the 2nd team San Francisco and Seattle on July 13–27, 2011, with two physicians and an administrative staff member joining the teams from RERF. The 1st team included Dr. Akihiko Suyama, Chief, Department of Epidemiology, Nagasaki, and the 2nd team Dr. Yoshimi Tatsukawa, Associate Senior Scientist, Department of Clinical Studies, Hiroshima, and Mr. Hideo Shinoda, Personnel Section Chief, Secretariat.

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

This project was commenced in fiscal 2004 by the Nagasaki prefectural and city governments 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 2011, Dr. Masazumi Akahoshi, Chief, Department of Clinical Studies, Nagasaki, joined the medical team to provide health counseling and guidance to A-bomb survivors in Seoul and Taegu, respectively, on September 5–9 and November 6–11, 2011.

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

RERF was designated as a collaborating center for radiation effects on humans by the WHO in 1979 and has been a member of the WHO Radiation Emergency Medical Preparedness and Assistance Network (REMPAN) since 1988. In response to the Fukushima Dai-ichi nuclear power plant accident occurring in March 2011, Dr. Roy E. Shore, RERF Vice Chairman, was appointed to serve as an advisor to the WHO Health Risk Assessment Working Group on the Fukushima Dai-ichi Nuclear Power Plant Accident in November 2011. He attended meetings of the WHO Working Group held in Geneva, Switzerland, on December 14–15, 2011 and March 22–23, 2012.

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

Dr. Kazunori Kodama, Chief Scientist, attended UNSCEAR meetings held in Vienna, Austria on May 23–27, 2011 and January 30–February 3, 2012. He also attended the UNSCEAR Japanese Committee meetings held in Tokyo on October 7, 2011, February 22, and March 14, 2012.

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

Dr. Nori Nakamura, Chief Scientist, who has been a member of the ICRP Committee 1 since July 2009, attended an ICRP meeting held in Tokyo on December 19, 2011.

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

Dr. Kodama, Chief Scientist, visited IAEA headquarters in Vienna, Austria, on November 1–3, 2011, to discuss collaboration between RERF, the Hiroshima International Council for Health Care of the Radiation-exposed (HICARE), and the IAEA. As a result, Dr. Yoshiaki Kodama, Chief, Department of Genetics, attended the 1st Research Coordinating Meeting held at IAEA headquarters in Vienna on March 21–23, 2012.

#### 7. Semipalatinsk-related collaborative activities

In relation to the collaborative study with Hiroshima University's Research Institute for Radiation Biology and Medicine, Dr. Hiroaki Katayama, Chief, Department of Information Technology, visited the Kazakhstan Scientific Research Institute of Radiation Medicine and Ecology in Semipalatinsk on May 30–June 4, 2011 and discussed the issue of dose estimate methodology with its researchers. He also traveled to Germany and Russia on March 7–15, 2012 visiting the German Research Center for Environment and Health and Burnasyan Medical Biophysical Center of the Russian Federal Medical Biological Agency. In Germany he met with Dr. Bernd Grosche to discuss epidemiological analysis of radiation effects based on a new dosimetry system for residents of the former nuclear test site area in Semipalatinsk, and in Russia met with Dr. Sergey Shinkarev and Dr. Evgeniya Granovskaya to discuss a dosimetry system for individual dose estimates in Semipalatinsk.

#### 8. Nagasaki University-related collaborative activities

Dr. Shore, Vice Chairman, presented a keynote lecture at a symposium of the Nagasaki University Global COE Program "Global Strategic Center for Radiation Health Risk Control" held in Nagasaki on October 20–22, 2011.

#### 9. Other international collaborative activities

- 1) Dr. Shore, Vice Chairman, participated in and presented lectures at the meetings of Analysis of Cancer Risks in Populations Near Nuclear Facilities organized by the U.S. National Academy of Sciences and held in Chicago, Illinois, on April 18–19, Atlanta, Georgia, on May 23–24, and Irvine, California, on July 20–21, 2011.
- 2) Dr. Shore, Vice Chairman, presented at the Exploratory Workshop on Radiation-induced Lens Opacities Resulting from Low Dose Exposure hosted by the Institut de Radioprotection et de Surete Nucleaire in Bombon, France, on September 20–23, 2011.
- 3) Dr. Shore, Vice Chairman, presented at an annual conference of the German Association for Medical Informatics, Biometry and Epidemiology and the German Society for Epidemiology held in Mainz, Germany, on September 26–29, 2011.
- 4) Dr. Kodama, Chief Scientist, attended and presented at the "International Expert Symposium in Fukushima—

Radiation and Health Risks” on September 11–12, 2011. Dr. Toshiteru Okubo, RERF Chairman, also attended the symposium and served as chairman.

- 5) Dr. Kodama, Chief Scientist, delivered three seminars at the Training Seminar on Medical Care of Atomic-bomb Survivors hosted by HICARE in Honolulu, Hawaii, on February 23–24, 2012.

## Acceptance of Visitors from Overseas for Briefing and Training

(Total in FY2011: 149 persons, excluding general visitors)

### Hiroshima: 129 persons

#### Visitors related to Hiroshima International Council for Health Care of the Radiation-exposed (HICARE) (21 persons)

##### 1) South Korea-related (7 persons)

A group of four members visited RERF on June 13, 2011, for training on medical care for A-bomb survivors residing in South Korea. Another group of three members visited RERF on March 9, 2012, for short-term training on medical care for A-bomb survivors residing in South Korea.

##### 2) Others (14 persons)

One pathology physician from Riga Stradins University, Latvia, visited RERF for training on June 1–July 30, 2011. One physician each from Sugisawa Hospital and Nippo-Brazil Benefits Hospital, Brazil, and Medical Department Associate Director, Hina Mauka, Hawaii, the U.S., came to RERF for training on November 18, 2011. One physician from Nippo-Brazil Benefits Hospital, Brazil, and Medical Department Associate Director, Hina Mauka, Hawaii, the U.S., came to RERF for training on December 6, 2011. Five trainees from National Cheng Kung University, Taiwan, came to RERF on January 11, 2012. One physician from Santa Cruz Hospital, Sao Paulo, Brazil, and one physician and one medical student from the University of Hawaii John A. Burns School of Medicine came to RERF for training on February 14, 2012.

#### Visitors related to Japan International Cooperation Agency (JICA) (45 persons)

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

Eleven trainees from Cambodia, Kenya, Malawi, the Philippines, Zambia, Zimbabwe, and China visited RERF for the “Stop Tuberculosis Action Course” on May 25, 2011.

##### 2) Japan Industrial Safety & Health Association

Seven trainees from Indonesia, Kosovo, Laos, Mongolia, the Philippines, and Malaysia visited RERF for the “Group Training Course on Occupational Disease Prevention and Working Environment Improvement” on July 5, 2011.

##### 3) Kitakyushu International Techno-Cooperative Association

Seven trainees from Malaysia, the Philippines, and Vietnam visited RERF for the “Group Training Course on

Occupational Health Prevention and Preventive Health Care” on September 14, 2011.

##### 4) National Cerebral and Cardiovascular Center

Five trainees from the Philippines, Albania, and Argentina visited RERF for the “FY2011 Group Training Course on Cardiovascular Diseases” on October 31, 2011.

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

Eight trainees from Afghanistan, Cambodia, Indonesia, Kenya, Myanmar, South Africa, Zambia, and Mongolia came for the “Group Training Course in STOP TB Hands on Laboratory Practice Management for HIV and MDR TB” on November 1, 2011.

##### 6) National Cancer Center

Seven trainees from Albania, Costa Rica, Serbia, Uruguay, Sri Lanka, and Nigeria visited RERF for the “Practice Course on the Latest Cancer Treatment and Diagnosis” on November 7, 2011.

#### Visitors related to Japan Atomic Energy Agency (52 people)

- 1) Thirty trainees from Bangladesh, Cambodia, China, Indonesia, Jordan, South Korea, Laos, Malaysia, Mongolia, the Philippines, Thailand, the United Arab Emirates, Vietnam, Myanmar, and the U.S. visited RERF for the “Regional Training Course on Nuclear Materials and Physical Protection of Facility” on October 23, 2011.
- 2) Twenty-two trainees from Australia, Bangladesh, Cambodia, Indonesia, Kazakhstan, Laos, Malaysia, Thailand, Mongolia, Turkey, Vietnam, and Austria visited RERF for the “International Training Course on State Systems of Accounting for and Control of Nuclear Material” on December 2, 2011.

#### Visitors related to RERF training program (3 persons)

One researcher from the Queen Elizabeth Hospital, Hong Kong, China, visited RERF for training on December 5–16, 2011. One researcher from the National Cancer Center, South Korea, visited RERF for training on January 4–February 25, 2012. One laboratory assistant/medical student from the Laboratory of Biochemistry of Riga Stradins University, Latvia, visited RERF for training on January 4–February 25, 2012.

#### Visitors from the International Atomic Energy Agency (IAEA) (4 persons)

Dr. Rethy Chhem, Director, Division of Human Health, Department of Nuclear Sciences and Applications, IAEA, visited RERF Hiroshima on August 5, 2011.

Dr. Jan Wondergem, Applied Radiation Biology and Radiotherapy Section, IAEA, visited RERF Hiroshima on September 15, 2011.

Dr. Daud Mohamad, IAEA Deputy Director General and Head of the Department of Nuclear Sciences and Applications, and Dr. Eduardo Rosenblatt, Head of the Applied Radiation Biology and Radiotherapy Section, Division of Human Health, Department of Nuclear Sciences and Appli-



cations, visited RERF Hiroshima on November 22, 2011.

#### **Others (4 persons)**

Through the U.S. Consulate, a graduate student from the University of California, San Diego (UCSD) visited RERF on July 29, 2011. Dr. Rijo Kalevi Munther, Director for the Finnish Funding Agency for Technology and Innovation (Tekes), Embassy of Finland, visited RERF Hiroshima on June 28, 2011.

Through the Japanese Ministry of Foreign Affairs, Dr. Dimitry Anatolijovich Bazyka, Director-General and Head of the Department of Clinical Immunology at the Research Center for Radiation Medicine, the National Academy of Medical Sciences of Ukraine, and Dr. Valery Alexandrovich Kashparov, Director of Ukraine Institute of Agricultural Radiology, the National University of Life and Environmental Sciences of Ukraine, visited RERF Hiroshima on February 24, 2012.

#### **Nagasaki: 20 persons**

##### **Visitors related to Nagasaki Association for Hibakushas' Medical Care (NASHIM) (15 persons)**

Six trainees for the NASHIM's FY2011 summer program from Russia, Ukraine, Belarus, and Kazakhstan traveled to the Nagasaki Laboratory on July 28, 2011. Another trainee from Ukraine came to the Nagasaki Laboratory for the NASHIM's FY2011 summer program on August 11, 2011. Two physicians from South Korea came to RERF Nagasaki for training on medical care of A-bomb survivors on December 19, 2011. Two physicians from Brazil came to RERF Nagasaki for training on medical care of A-bomb survivors on February 15, 2012. A team of four physicians from South Korea visited RERF Nagasaki for training on medical care of A-bomb survivors on February 15, 2012.

##### **Visitors related to JICA (5 persons)**

Five trainees from Cambodia, Mongolia, the Solomon Islands, and Uruguay visited RERF Nagasaki for the "FY2011 Group Training Course for Medical Experts" on February 10, 2012.

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

##### **June 1–July 30, 2011**

Sandra Jaudzema, physician, Department of Pathology, Faculty of Medicine, 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, RERF. Additional training on pathology in Japan at the Department of Pathology (Prof. Wataru Yasui), Hiroshima University School of Medicine, the Department of Pathology, National Hospital Organization Kure Medical Center, and the Department of Pathology, Chugoku Cancer Center.

##### **August 1–November 25, 2011**

Luzhou Xu, physician at the affiliated hospital of Nanjing University of Traditional Chinese Medicine, China, visiting research scientist, Hiroshima University

Training on analysis of radiation-induced unreparable damage, in particular focused on the mechanisms of DNA double-strand break repair following ionizing radiation exposure, at the Cytogenetics Laboratory, Department of Genetics.

##### **January 4–February 25, 2012**

Hye-Jin Shin, research scientist, Radiation Medicine Branch, National Cancer Center, South Korea

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

##### **January 4–February 25, 2012**

Georgijs Moisejevs, laboratory assistant/medical student, Laboratory of Biochemistry, Riga Stradins University, Latvia

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