### Board Members

<table>
<thead>
<tr>
<th>Title</th>
<th>Name</th>
<th>Tenure</th>
<th>Mission</th>
</tr>
</thead>
<tbody>
<tr>
<td>President</td>
<td>Yoshiharu YONEKURA</td>
<td>April 1, 2011- March 31, 2016</td>
<td>Represents the Institute and is responsible for managing its operations</td>
</tr>
<tr>
<td>Executive Director</td>
<td>Makoto AKASHI</td>
<td>April 1, 2015- March 31, 2016</td>
<td>Assists the President in managing the operations of the Institute in accordance with the directions of the President</td>
</tr>
<tr>
<td>Executive Director</td>
<td>Shinichi KUROKI</td>
<td>April 1, 2015- March 31, 2016</td>
<td>Assists the President in managing the operations of the Institute in accordance with the directions of the President</td>
</tr>
<tr>
<td>Auditor</td>
<td>Sanae AOKI</td>
<td>April 1, 2015- the approval of the financial statements in 2015</td>
<td>Audits the operations of the Institute</td>
</tr>
<tr>
<td>Auditor (part-time)</td>
<td>Masatoshi ARISAWA</td>
<td>April 1, 2015- the approval of the financial statements in 2015</td>
<td>Audits the operations of the Institute</td>
</tr>
</tbody>
</table>
NIRS has regarded Human Resources Development (HRD) as one of its most important missions since the time of its foundation. Therefore, NIRS established a training school in 1959 and developed it into Center for HRD in 2013 to expand its ability to carry out the mission. We have offered training courses to nurture specialists in radiation protection and workers handling radiation in the medical field such as medical doctors, nurses, and radiologists. Our training courses are characterized by lectures by various professionals and by hands-on practice using radiation sources and various measuring instruments.

**Our efforts in the first four years of the mid-term (from April 2011 to March 2015)**

As this mid-term began just after the Fukushima Daiichi Nuclear Power Plant accident in March 2011, we had to greatly modify the original plan for it.

First of all, we increased the numbers of trainees in each training course and of the training courses in order to respond to demands after the accident. Secondly, we conducted new training courses to give lectures to public health nurses and school teachers. Persons in these occupations could play an important role in local communities by properly explaining about radiation to the general public and children, respectively, and they could be ambassadors to spread accurate knowledge to people efficiently. Thirdly, we offered lectures to high school, junior high school and elementary school students to directly provide accurate basic knowledge on radiation to the public. On the other hand, we also conducted new courses to enhance the essential capacities for radiologist and others.

As a result, the total number of trainees doubled in the first year (from April 2011 to March 2012), and tripled in the second after the accident (from April 2012 to March 2013). In the next two years from April 2013 to March 2015, the number remained high as can be seen in Fig.1.

**The final year of the mid-term (from April 2015 to March 2016)**

Four years after the accident, the number of applications for the training courses did not decrease but remained steady in the final year of the mid-term. Thus, we were able to maintain the increased number of training courses. In addition, we had training courses for school teachers, students, policemen, and firefighters according to requests from local governments. These increasing demands are the likely result from the NIRS training courses becoming well known. Finally, we had almost 1,200 trainees from April 2015 to March 2016, which was more than in the previous year. We have emphasized hands-on practice, group discussions and table top exercises for efficient learning and promoted the introduction of IT using a tablet type portable terminal.

<table>
<thead>
<tr>
<th>Training courses</th>
<th>Contents &amp; target learners</th>
<th>No. of categories</th>
<th>Total courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiation Experts</td>
<td>• general radiation protection</td>
<td>10</td>
<td>16</td>
</tr>
<tr>
<td></td>
<td>• radiobiology for nurses</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• medical physics</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• imaging diagnosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiation Emergency Medicine</td>
<td>• medical workers</td>
<td>10</td>
<td>13</td>
</tr>
<tr>
<td></td>
<td>• first responders</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Radiation Risk Communicators</td>
<td>• public health nurses</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>• school teachers</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>• local government employees</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>• students from elementary school to university</td>
<td>8</td>
<td>10</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>35</td>
<td>44</td>
</tr>
</tbody>
</table>
Fig. 1 The number of trainees has been increasing since Fukushima Daiichi Nuclear Power Plant accident in 2011.

Trainees can learn efficiently through hands-on practice which is adjusted to their learning level.

We offered training courses for school students to provide basic knowledge on radiation.

The numbers of requests to provide training courses for radiation protection have been increasing from fire and police departments.
International Collaboration

Working with international organizations

**UNSCAR**
United Nations Scientific Committee on the Effects of Atomic Radiation
Japan Expert Panel for UNSCEAR

**ICRP**
International Commission on Radiological Protection
Biological Effect, Medical Exposure Environment, Ethics

**ICRU**
International Commission on Radiation Units and Measurements
Charged Particle Therapy

**OECD/NEA**
OECD/Nuclear Energy Agency
Radiation Protection and its Framework for Public Health

**IAEA**
International Atomic Energy Agency
Collaborating Centre for Charged Particle Therapy, Molecular Imaging and Radiation Biology
Radiation Emergency Medicine (RANET)

**WHO**
World Health Organization
Collaborating Centre for Radiation Emergencies, Biodosimetry, Indoor Radon Exposure and Medical Exposure

**IAEA/RCA**
Radiotherapy, Nuclear Medicine Radiation Protection
IAEA/Regional Cooperative Agreement for Research, Development and Training Related to Nuclear Science and Technology

**IAEA/WHO**
Radiation Emergency Medicine Network System in Asia
Asian Nuclear Safety Network

**FNCA**
Forum for Nuclear Cooperation in Asia Radiotherapy

**ISO**
International Organization for Standardization
Radiation Dosimetry

**GHSI**
Global Health Security Initiative
Anti-terrorism (Radiation)

**JICA**
Japan International Cooperation Agency
Radiology, Education and Training

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**FNCA**
- FY2015 Workshop on Radiation Oncology (Hanoi, Vietnam)

**IAEA**
- 2015 Interim Meetings and Workshop of MODARIA WG 4 ‘Radioecological Data’ and WG 8 ‘Biota Modelling’
- Consultancy Meeting to Elaborate the Concept and Implementation of EPR Capacity Building Centres
- 2nd Consultancy Meeting on the Revision of the Emergency Preparedness and Response (EPR) Medical 2005
- IAEA Nuclear Energy Management School Abu Dhabi (UAE)
- 2015 Interim Meeting of MODARIA WG 3 ‘NORM and Legacy Sites’
- Final Research Coordination Meeting on CRP ‘Production of Mo-99/Tc-99m’
- International Conference on Clinical PET-CT and Molecular Imaging: PET-CT in the Era of Multimodality Imaging and Image Guided Therapy
- International Conference on Global Emergency Preparedness and Response
- 4th Technical Meeting on Modelling and Data for Radiological Impact Assessments (MODARIA)
- Technical Meeting on Radiation Biology of Charged Particle Therapy
- IAEA/RCA Mid-Term Review Meeting on Strengthening the Effectiveness and Extent of Medical Physics Education and Training (Mumbai, India)

**ICRP**
- ICRP TG94 Draft Preparation Meeting (Paris, France)
- ICRP2015: 3rd International Symposium on the System of Radiological Protection (Seoul, Korea)

**IEC**
- IEC/SC62C/WG1 Meeting (Equipment for Radiotherapy, Nuclear Medicine and Radiation Dosimetry) (London, UK)

**ISO**
- ISO/TC85/SC2 and WG22/WG23 Meetings (Boras, Sweden)

**UNSCAR**
- 62nd Session of UNSCEAR
- UN General Assembly (New York, USA)

**WHO**

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**2011-2015 NIRS staff sent to the experts’ meetings**

<table>
<thead>
<tr>
<th>Year</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>12</td>
<td>8</td>
<td>6</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>2012</td>
<td>7</td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>5</td>
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<tr>
<td>2013</td>
<td>6</td>
<td>4</td>
<td>5</td>
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<td>4</td>
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<tr>
<td>2014</td>
<td>8</td>
<td>6</td>
<td>5</td>
<td>4</td>
<td>3</td>
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<tr>
<td>2015</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
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</table>

*The meetings were held at the organization’s head office unless otherwise indicated.*
International Collaboration

Working with international organizations

**Sweden**
- Karolinska Institute

**Germany**
- Cologne
  - German Aerospace Center
  - Ulm University
- Heidelberg
  - Heidelberg University Hospital
  - Oberschleisheim
  - BFS

**Norway**
- Bergen
  - Haukeland Univ. Hospital

**France**
- Fontenay-aux-Roses
  - CEA Life Sciences Division
- Grenoble
  - University Joseph Fourier

**Italy**
- Milan
  - CNAO Foundation

**Austria**
- Wiener Neustadt
  - MedAustron
- Vienna
  - Vienna University of Technology
  - Atomic Institute of the Austrian Universities
  - International Atomic Energy Agency (IAEA)

**Russia**
- Dubna
  - Joint Institute for Nuclear Research
- Moscow
  - Institute of Biomedical Problems of the Russian Academy of Sciences
- Vladivostok
  - Budker Institute of Nuclear Physics
  - Far Eastern Federal University

**Bulgaria**
- Stara Zagora
  - Trakia University

**Romania**
- Bucharest
  - Sapientia University of Cluj-Napoca

**China**
- Beijing
  - Beijing Institute of Radiation Medicine
  - National Institute of Radiological Protection
  - Institute of High Energy Physics
  - Tsinghua University Yuquan Hospital

**Korea**
- Seoul
  - Korean Institute of Radiological and Medical Sciences
  - Daejeon
  - Korea Institute of Nuclear Safety
  - Jeju
  - Jeju National University Hospital

**Taiwan**
- Taipei
  - Chang Yung-Fa Foundation
  - Taipei Veterans General Hospital

**Philippines**
- Manila
  - Philippine Nuclear Research Institute

**Malaysia**
- Penang
  - Universiti Sains Malaysia

**Thailand**
- Bangkok
  - Chulalongkorn University

**Australia**
- Wollongong
  - University of Wollongong

**Shanghai**
- Shanghai Institute of Applied Physics
- Shanghai Proton and Heavy Ion Center
- Suzhou
- Soochow University
- Lanzhou
  - Institute of Modern Physics, Chinese Academy of Sciences

**USA**
- Stillwater
  - Oklahoma State University
- Fort Collins and Aurora
  - Colorado State University
  - University of Colorado
  - Poudre Valley Hospital
- Rochester
  - Mayo Clinic
- New York
  - Columbia University
- Berkeley
  - Lawrence Berkeley National Laboratory
- Dallas
  - UT Southwestern Medical Center
## International Collaboration

### Year in Review — international meetings, training courses, etc.

<table>
<thead>
<tr>
<th>Year</th>
<th>Month</th>
<th>Event</th>
</tr>
</thead>
</table>
| 2015 | April | 1 April - 27 June  
IAEA-CC Intensive Training Course on Radiochemistry |
|      | June  | 22-26 June  
IAEA Train the Trainers Workshop on Medical Physics Support for Nuclear or Radiological Emergencies (Fukushima, Japan) |
|      | June  | 29-30 June  
NIRS-CEA/DSV Workshop on Treatment of Contamination and Dose Assessment (Fontenay-aux-Roses, France) |
|      | July  | 27-30 July  
NIRS-KIRAMS Training Program on Radiation Emergency Medicine for Korean Medical Professionals |
IAEA-NIRS Technical Meeting on the Future of Biodosimetry in Asia: Promoting a Regional Network |
|      | Oct.  | 7 Oct.  
Visit by HE Dr. Pooda, Minister of Scientific Research and Innovation, Burkina Faso |
|      | Oct.  | 10 Oct.  
Visit by Colorado State Governor, Mr. Hickenlooper, et al. |
IAEA Consultancy Meeting on Lessons Learned from the Train the Trainers Workshop on Medical Physics Support for Nuclear or Radiological Emergencies |
Signing the Memorandum between LBNL and NIRS (Berkeley, CA, USA) |
8-9 Nov.
Japan-China Joint Seminar on Radiopharmaceutical Chemistry (JCSRC 2015)

9-14 Nov.
International Training Course on Carbon-Ion Radiotherapy (ITCCIR2015)

9-21 Nov.
IAEA-CC Workshop on Heavy Ion Radiotherapy

18-20 Nov.
IAEA Regional Meeting on Development of Action Plans for Potential Capacity Building Centres for Medical Response to Radiological Emergencies in Asia and the Pacific Region

7-10 Dec.
NIRS Training Course on Radiation Emergency Medicine in Asia 2015 in Cooperation with IAEA and WHO

10-11 Dec.
SPHIC-NIRS Joint Symposium on Heavy Ion Radiotherapy (Shanghai, China)

16 Dec.
Symposium on ‘Lifestyles and Radiation’

9 Jan.
NIRS 2nd International Symposium on Heavy-Ion Radiotherapy and Advanced Technology
## Budget (FY2015)

(As of April 1, 2015)

<table>
<thead>
<tr>
<th></th>
<th>(In million yen)</th>
<th>Percent (%) of budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total</td>
<td>11,838</td>
<td></td>
</tr>
<tr>
<td>Management expense grants</td>
<td>9,450</td>
<td>79.8%</td>
</tr>
<tr>
<td>Maintenance grants</td>
<td>162</td>
<td>1.4%</td>
</tr>
<tr>
<td>Income from own operations</td>
<td>2,226</td>
<td>18.8%</td>
</tr>
<tr>
<td>Income from operations ordered by government agencies, etc.</td>
<td>0</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

**Management expense grants** 80%  
**Maintenance grants** 1%  
**Income from own operations** 19%  
**Income from operations ordered by government agencies, etc.** 0%
### Personnel (FY2015)

<table>
<thead>
<tr>
<th></th>
<th>Total</th>
<th>Research Staff</th>
<th>467 (56.5%)</th>
<th>Administrative Staff</th>
<th>357 (43.5%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Permanent</td>
<td>222 (46.2%)</td>
<td>Permanent</td>
<td>113 (31.0%)</td>
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<tr>
<td></td>
<td></td>
<td>Fixed-term</td>
<td>245 (53.8%)</td>
<td>Fixed-term</td>
<td>244 (69.0%)</td>
</tr>
<tr>
<td>Total</td>
<td>816</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(As of April 1, 2015)