

## Preface



The fiscal year 2004 (FY2004) was the 4th year since the National Institute of Radiological Sciences (NIRS) was reformed as an Independent Administrative Institution (IAI) in April 2001. Our activities that have followed the five-year mid-term plan have progressed smoothly. The achievement of our aims is in sight by the end of FY 2005.

We celebrated the 10 year anniversary since the initiation of the clinical trials of heavy ion cancer therapy in 1994. Successful results with high rates of local control of various cancers were reported both in memorial meetings and publications for both specialists and the general public. The largest number of patients (396) was treated in FY 2004, 72% of which (286) were treated as "highly advanced medical procedure for solid cancer". This has provided us with income additional to that from government budgets. We are pleased to

announce that carbon-beam cancer therapy has come into the new phase in the first year of "the 3rd ten-year strategic plan against cancer (2004-2013)" issued jointly by MEXT (Ministry of Education, Culture, Sports, Science and Technology) and MHLW (Ministry of Health, Labor and Welfare). This plan aims at "significant decrease of morbidity and mortality of cancer." We are sure that carbon-beam radiotherapy will greatly contribute to decrease cancer mortality.

In FY 2004 a research project in NIRS on the development of a compact-size carbon beam accelerator to be applied in the medical community was accelerated by a markedly increased budget. We are aiming at completion of the present project by the end of FY 2005.

We began to utilize the newly built research building for low dose radiation effects experiments in FY 2004. The neutron irradiation facility in the new building is to be used after a delay in the schedule. The facilities, when they are fully operated, will facilitate important research projects on biological effects of low dose radiation.

Extra funding was obtained in FY 2004 for the establishment of an appropriate system of medical preparedness for nuclear emergencies including accidents, disasters, and deliberate human actions. The cooperation of multiple institutes and hospitals networking with each other is of increasing importance, for which NIRS plays a central role.

International organizations such as UNSCEAR, ICRP and IAEA have been working on radiological protection of the environment or non-human biota. The importance of this concept has been attracting interests of radiation ecologists and regulators. This emerging field encourages radiation ecologists to promote research in cooperation with radiation biologists and establish a new regulatory framework in cooperation with regulators.

In FY 2004, we started to make a research strategy for the next five year mid-term plan which starts from April 2006. In addition, a general review of IAI was performed by the initiative of administrative reform promotion group of the Japanese government. NIRS was included in the group of IAI which were reviewed one year ahead in FY 2004. The framework for the next five-year plan was made by the end of 2004. We have started to make our detailed plan within this framework.

On the basis of foreseeable successful outcomes by the end of FY 2005, NIRS will continue and enhance its research activities and management in the next 5-year plan. Decision was made to start a molecular imaging research project in FY 2005, which would facilitate a new domain of science by fusing medical imagiology with molecular biology.

I cordially ask for the support and cooperation and welcome critiques of those who are interested in NIRS and its activities.

A handwritten signature in black ink that reads "Yasuhito Sasaki". The signature is written in a cursive, flowing style.

Yasuhito Sasaki, M.D., Ph.D.

President