## Message from the President

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Welcome to the third issue of the "JAEA R&D Review", which will inform you of the current R&D activities of the Japan Atomic Energy Agency (JAEA).

Three years have passed since the establishment of JAEA. We are now reaching a very important stage for the achievement of our goals for our R&D activities in the first mid-term plan. In addition, the importance of nuclear energy was recognized at the G8 Summit held in Tohyako, Hokkaido, Japan in July, 2008, because of its stable supply of energy and potential to solve global environmental problems. JAEA is the sole comprehensive R&D institution aiming at facilitating both basic research and practical application with regard to nuclear energy in Japan. In other words, our research areas cover a wide range of sciences and technologies needed for peaceful and safe uses of nuclear energy. Through our activities, JAEA has been contributing significantly to creating and improving various innovative technologies related to nuclear energy.

In the field of Fast Breeder Reactor (FBR) cycle technology designated as a "Key Technology of National Importance" by the government of Japan, JAEA has been making great efforts to restart "MONJU" (a prototype FBR) and also has been promoting R&D of the FBR cycle for commercialization. In the field of R&D for utilization of applied quantum beams, JAEA continues to put great effort into the operation of "J-PARC" (high-intensity proton accelerator project) which utilizes the most advanced quantum beam technologies. In the field of fusion energy, JAEA is strongly pursuing the ITER Project and Broader Approach Project which are recognized as a science and technology of strategic priority. Furthermore, JAEA is constructing two underground research laboratories where R&D projects for disposal of high-level radioactive waste are being undertaken. In addition, JAEA is steadily executing a new mission, for disposal of radioactive wastes which are generated by research facilities.

The mission of JAEA is to improve the quality of life for all people by innovative advancements in nuclear energy. I strongly believe that JAEA will achieve this goal and become one of the world's most authoritative and comprehensive institutes, what we call a Center of Excellence (COE), for creative and reliable nuclear energy R&D.

This publication constitutes a review of our achievements in the fiscal year 2007. It provides you with a flavor of some of the work that has been carried out, and also invites you to check the references listed and contact the researchers if there are any topics that you wish to learn more about. I hope that you will take a few minutes to peruse some of the following pages. I would be most gratified if I could hear from you with any comments on this publication.

I hope that you enjoy this publication. Thank you very much for your interest.