## INTRODUCTION

ur institute, the National Institute for Basic Biology (NIBB), has developed as a center of excellence in research, education, and inter-university collaboration in the various fields of basic biology since its foundation in 1977. In 2004, NIBB, together with four other national research institutes, established a new organization, the National Institutes of Natural Sciences (NINS), one of four Inter-University Research Institute Corporations. In order to carry out our mission we have focused our efforts on five major activities, namely Promotion of Collaborative Research Projects, Promotion of Academic Research, Development of New Academic Fields, Cultivation of Future Researchers, and International Cooperation and Outreach. Our works and results for 2010 are shown in this report.

Following from 2009, we welcomed several new colleagues in 2010, including 2 professors 4 associate professors, 7 assistant professors and 5 NIBB research fellows, while one colleague left the institute as shown on page 7. With the help of these new members, we produced a variety of high-ranked research as reported from page 8 to 78. The activities of our supporting divisions are shown on the following pages 74–85.

In addition to our current research, education of the next generation of researchers is another important aim of NIBB. As a department of the Graduate University for Advanced Studies, we are happy we have the opportunity to educate graduate students.

As international collaborative activities, we hosted the 7th Okazaki Biology Conference under the title "The Evolution of Symbiotic Systems". This conference was celebrated by the attendants because this was the first meeting designed to promote interaction between symbiosis researchers working on plant systems and researchers working on animals and other organisms (page 86). We also held two NIBB Conferences: the 56th conference on "Neocortical Organization" and the 57th on "the Dynamic Genome", and participated in the 2<sup>nd</sup> NIBB-MPIPZ (Max Planck Institute for Plant Breeding Research) joint symposium on "Plant Science Communications 2010" in Okazaki as shown on pages 87-89. Plant researchers and students attended from TLL (Temasek Life Sciences Laboratory, Singapore), following the establishment of a Memorandum of Understanding on academic exchange between NIBB and TLL in August, 2010. In addition, we held the 5th NIBB International Practical Course on "Developmental Genetics of Zebrafish and Medaka III", as reported on page 90.

Based on our endeavors, as shown in this booklet, we hope to develop joint activities in tight collaboration with external researchers and supporters. We hope you enjoy reading about the science being done at NIBB in the following pages. As always we appreciate your suggestions and comments on our activities.

> Kiyotaka OKADA, D. Sci. Director-general, NIBB May 27, 2011



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