On behalf of the Japanese Society for Pediatric Endocrinology (JSPE), I would like to give a brief overview of our present status and future prospects in Pediatric Endocrinology.

Basic Research

In recent years, the field of pediatric research has made great progress with the discovery of new genes responsible for known endocrine disorders and the clarification of their disease mechanisms. For example, we have identified a gene responsible for P450 oxidoreductase deficiency (POR) and obtained data on its genotype-phenotype correlations. This has unraveled the meaning of the presence of combined CYP17A1 and CYP21A2 deficiency with and without skeletal disorder, and helped to demonstrate the efficacy of steroid supplementation therapy in a substantial portion of patients with low POR activities. Subsequent studies in POR deficiency have also demonstrated the existence of a backdoor pathway to dihydrotestosterone during fetal life, which is a novel steroidogenic pathway that may be involved in virilization in females. Furthermore, JSPE members have discovered for the first time a novel gene for hypospadias (MAMLD1) and shown the relevance of OTX2 to pituitary development and function. Research on the genomic imprinting involved in fetal and placental growth and development has also made significant progress. We will continue to strive to advance this field of pediatric research on a world-wide scale.

Clinical Research

A variety of clinical studies are in progress. First, a new era has emerged in the field of disorders of sex development (DSD). In 2006, we had a world-wide consensus meeting and established a standard guideline in the management of DSD. Following this guideline, we created a DSD committee in the JSPE, and started clinical work to make a series of standard manuals for patient care at various life stages, e.g. the neonatal, infantile, childhood, adolescent, and adulthood periods. Second, with the advances in the management of malignant disorders, many children with malignancies can survive to adulthood. Consequently, it has become evident that such patients termed childhood cancer survivors (CCS) have many endocrine-related disorders, such as growth failure, abnormal puberty, infertility, and so forth. To cope with these problems, we formed a CCS committee in the JSPE, and started clinical research to find better ways to manage such patients. Third, growth hormone (GH) therapy has become possible in patients with small-for-date (SFD) short stature. Thus, it is our responsibility to evaluate the long-term GH effect and to assess whether there are good responders and poor responders to GH therapy in terms of underlying genetic abnormalities. Finally, classic diseases, such as vitamin D deficient rickets, are being revisited, due to excessive food restriction for allergy and excessive avoidance of sunshine. Hypothyroidism caused by excessive iodine intake from seaweed remains a long-term research topic with us. Prevention of such disorders is one of the most important issues.

Social Morbidity and Child Health

We also face serious child health problems such as psychological disorders that reflect social morbidity. Problems in the pediatric field include obesity, diabetes mellitus, metabolic syndrome, weight loss in girls, and menarcheal abnormality. What can we do for these patients? It is very difficult to answer such a question, but we must keep these problems in mind when we see
these patients. For example, when we treat girls with amenorrhea, we must ask them and their parents about their life style. It is quite insufficient to perform endocrine studies alone. This may become one of the most critical issues in the near future.

**Nation-wide and International Collaboration**

To achieve the above goals, it is essential that we have good collaboration. It is impossible for a single person to perform basic and clinical research and to cope with the social aspects of the problems. We must establish a nation-wide collaboration system in the JSPE, such as the DSD and CCS committees. Furthermore, international collaboration is also important. In this regard, we have started collaborative research with the European Society for Pediatric Endocrinology, and we are seeking the way to collaborate with our Asian sister pediatric societies as well.

**Conclusion**

Since pediatric endocrinology covers a wide range of disorders, we must seek to establish bridges between basic research and clinical research and between pediatrics and child health. The way to the future is not easy, but we can strive to open the way.