Introduction

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This supplement presents the latest research in endometriosis which was featured at the 2nd Japan Conference on Endometriosis, held in Kanagawa, Japan at the Hakone Prince Hotel on May 8, 1999, and sponsored by Takeda Pharmaceutical Industries, Ltd. Attendees at this conference were fortunate to hear informative presentations and stimulating discussions from many bright investigators at the forefront of this field.

Professor Kevin Osteen of Vanderbilt University School of Medicine, USA, discussed the regulation of endometrial matrix metalloproteinase as a possible therapeutic strategy for the treatment of endometriosis. He used in vitro models to investigate the relationships between progesterone-associated cytokines and matrix metalloproteinase expression. In addition, in a second talk, Dr. Osteen presented evidence of concern to us all about a possible association between endometriosis and environmental exposure to dioxin. His group investigated whether dioxin can disrupt steroid regulation of endometrial matrix metalloproteinases.

Angiogenesis in the normal uterine endometrium and in tumors occurs at a rapid rate. Assistant Professor Jiro Fujimoto of Gifu University, Japan, reported on angiogenesis in endometriosis, and discussed how the various angiogenic factors may contribute to vascular pathogenesis of endometriosis under the influence of ovarian steroids.

Assistant Professor Jo Kitawaki of Kyoto Prefectural University of Medicine, Japan, evaluated the clinical use-

fulness of a diagnostic test for endometriosis based on the detection of an aromatase cytochrome, P450. This new technique may allow clinicians to screen for the presence of endometriosis at outpatient infertility clinics.

It has long been known that free radicals are critical to the proper functioning of the reproductive process. Assistant Professor Hirotaka Ota of Akita University School of Medicine, Japan, shared his findings concerning the role of free radicals in the process of implantation, and the effect of superoxide dismutase expression in endometriosis.

Recently, new criteria for pigmented lesions in pelvic endometriosis have been established, and lesions are now macroscopically classified as red, black, or white. Dr. Aki-ira Fujishita of Nagasaki University reported the latest findings on immunohistochemical studies to investigate differences in these pigmented lesions according to proliferation or expression of angiogenic factors.

All the investigators featured in this supplement are on the cutting edge of research on endometriosis. New understanding of morphologic and biochemical molecular function, such as that distinguishing eutopic and ectopic endometrial tissue, are critical to implementing new therapies for the successful treatment of endometriosis. We are fortunate to share in the discoveries presented in this supplement to advance the knowledge base on this serious disease.