Preface

The Third International Symposium on Cellular Endocrinology was held at Lake Placid, New York in September 1987. The meeting was in honor of Dr. Ralph L. Brinster and Dr. Leroy C. Stevens for their pioneering work on mammalian embryogenesis and development of the transgenic animal and the teratocarcinoma model. Their techniques and studies have opened up whole new areas of analysis of a variety of new cellular factors involved in oogenesis, embryogenesis, and terminal differentiation.

After highlighting the many intellectual, spiritual, and technical contributions that Dr. Brinster and Dr. Stevens have made during the many years of their involvement in analysis of developmental problems, several scientific sessions were devoted to subjects of special interest both to the honored guests and to the participants in the symposium. These scientific sessions clearly demonstrated how Drs. Brinster and Stevens have stimulated many scientists to make major contributions to the study of mammalian development.

Areas covered in the symposium include analysis of gene expression in differentiated tissues, factors that play an important role in oocyte maturation and fertilization, and use of transgenic mice to elucidate the basic mechanism of gene programming during development. A session on teratocarcinomas demonstrated how this system has given, and will continue to give, insight into basic biological questions concerning cellular factors, both endogenous and exogenous, that play a role in development. Using transgenic animal models, several new insights into cancer and other aberrant growth patterns are now open to intense investigation. Finally, a session on *cis* DNA elements and *trans*-acting factors during gene activation gave the feeling that complex developmental gene circuits may be dissected in the future by means of in vitro analysis together with transgenic animal systems.

We again thank Dr. Ralph L. Brinster and Dr. Leroy C. Stevens for their contributions toward making it possible for scientists to study transgenic animal systems as the basis for elucidating a variety of fundamental developmental problems.

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