Preface

In January 2002, Michael Schmid, Chief Editor of this journal, invited me to become a Guest Editor for a special issue with a theme like X chromosome inactivation or DNA methylation. I accepted his invitation, and we decided to widen the scope of the special issue to sex chromosomes of all vertebrates, because studies in non-mammalian vertebrates are not only invaluable in their own right, but also essential for a better understanding of various aspects of sex chromosomes in mammals, including humans.

It was a happy surprise that we received 46 papers by the end of January 2003 from colleagues throughout the world. I am very thankful to the authors for having prepared their articles within a very short period of time, and to all expert reviewers for their excellent assistance. This issue consists of reviews and original research reports on various aspects of sex chromosomes in vertebrates including sex chromosomes of lower vertebrates, the evolution of avian and mammalian sex chromosomes, dosage compensation, mechanisms of X inactivation, and the roles of the human X chromosome in ovarian and brain development to name but a few examples. Undoubtedly, this volume will provide a basis for further unfolding of research in the second century after the discovery of the sex chromosome in the grasshopper by McClung (1902).

I wish to thank Michael Schmid and Harold P. Klinger for their invaluable help, support and advice given to me while this unforgettable project with the cooperation of more than 180 authors and coauthors from eleven countries was being carried out. Much of the credit has to be awarded to Judith Hartz, Managing Editor of *Cytogenetic and Genome Research*, for skillfully managing many of the technical details associated with the preparation of this volume.

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