Preface

Among vertebrates fish is the largest group, with over 30,000 known species that inhabit almost every aquatic habitat on earth. Extraordinary variation exists in fishes' sexual development systems, including genetic and environmental sex determination, male and female heterogametic, single gene and polygenic systems, protandry, protogyny and simultaneous hermaphroditism, social influences on sex determination, and many combinations and variations between and within these systems. Some of the fishes' unique characteristics, such as a long evolutionary history since diverging from other vertebrates, recent and rapid species radiation in some families, relatively large broods and short generation times, and our ability to observe and manipulate sexual development, presents a wealth of opportunities to study different aspects of sexual development.

Seven years ago, Devlin and Nagahama published an extensive overview of sex determination and differentiation in fish [*Aquaculture* 2002;208:191–364]. Since then some major breakthroughs have occurred. The recent progress in studies on fish sexual development is very exciting, and draws interest from various research fields such as: developmental biology, genetics, evolution, ecology, conservation and aquaculture. We believe that the time has come to compile some of the recent hot topics of this field in our Journal. The major goal of this special issue is to provide a view of the broad range of scientific aspects that benefit from knowledge on sexual development in fish. The papers in this special issue cover the genetic basis of sex determination, gonadal differentiation, environmental effects on sexual development, evolutionary views, and applications in fisheries and aquaculture.

My thanks are due to the authors and reviewers who contributed their time and expertise and enabled putting this special issue together keeping the high scientific standard. I would also like to thank the Chief Editors of *Sexual Development*, for giving me the opportunity to edit this special issue.

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Bet-Dagan, March 2009