



## Mechanisms of Sex Determination and Reproduction in Aquatic Animals

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### Message from the Guest Editors

Dear Colleagues,

Sex determination and reproduction are complex mechanisms in aquatic species. Many aquatic animals show significant growth differences between male and female individuals. Thus, single-sex production may have dramatic economic benefits. In addition, the mechanism of reproduction is also important to analyse. Gonad maturation in some aquatic animals is a long process, while gonad maturation in some aquatic animals only needs 1-2 months. Both rapid and slow gonad development have negative effects on sustainable development. Slow gonad development will extend the breeding cycle, while rapid gonad development will result in inbreeding between the newborn animals, leading to a short life span, small size and low disease resistance. Steroid hormones have been proven to have dramatic effects on the process of sex determination and reproduction in aquatic animals. Thus, the mechanisms of sex determination and reproduction urgently need to be fully understood in order to establish techniques to produce single-sex populations and regulate gonad development in aquatic animals.

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## Message from the Editor-in-Chief

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