



## ZEBRAFISH SEX IS GENETICALLY DETERMINED WITHOUT DIFFERENTIATED SEX CHROMOSOMES

**Liew W.C.<sup>1,2</sup>, Bartfai R.<sup>1,3</sup>, Lim Z.<sup>1,3</sup>, Sreenivasan R.<sup>1</sup>, Orban L.<sup>1,3</sup>**

<sup>1</sup>Reproductive Genomics Group, Temasek Life Sciences Laboratory, 1 Research Link, National University of Singapore, Singapore. Fax:+65-68727517. Email: wcliew@tll.org.sg

<sup>2</sup>School of Biological Sciences, Nanyang Technological University, Singapore

<sup>3</sup>Department of Biological Sciences, National University of Singapore, Singapore

### **Introduction:**

Zebrafish is a popular research organism however its sex determination mechanism is still unknown. Recent publications suggest that environmental factors have minimal impact on zebrafish sex ratio.

### **Results and Discussion:**

Using classical breeding experiment we found that repeated single pair crossing produced broods of similar sex ratio. On the other hand, sex ratio across families were wide ranging (4.8% to 97.3% male). Further

examination by array comparative genomic hybridization using a custom-designed high density oligo array in 4 families failed to find universal sex-linked differences between the male and female genomes.

### **Conclusion:**

Taken together, our study suggests that zebrafish sex is genetically determined without differentiated sex chromosomes. Therefore we hypothesize that several autosomal factors might be involved in the sex determination of zebrafish.