



Isolation and characterization of novel microsatellite markers in *Mercenaria mercenaria*

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ABSTRACT. *Mercenaria mercenaria*, also known as the hard clam, is widely distributed in the coastal waters of temperate and tropical areas in the Asian Pacific region. This species is widely popular in the international market, especially in the United States, Europe, and other Western countries, because of its high protein value, taste, and simple farming requirements. In this study, 17 novel microsatellite loci from the *M. mercenaria* genome were developed using the fast isolation by amplified fragment length polymorphism of sequences containing repeats protocol. Thirty-two wild individuals were used to evaluate the degree of polymorphism of these markers. Results indicated that there were 11 polymorphic loci and six monomorphic loci, and the number of alleles per locus and the polymorphism information content ranged from two to six and from 0.059 to 0.498, respectively. The observed and expected heterozygosity varied from 0.0625 to 0.5333 and 0.0615 to 0.4977, respectively. The Y1-4 locus deviated significantly from Hardy-Weinberg equilibrium (HWE) after Bonferroni correction was applied, while the other loci were in HWE. These loci will provide useful information for *M. mercenaria* population genetic studies.

Key words: *Mercenaria mercenaria*; Microsatellites; Genetic markers