Development and characterization of 27 microsatellite markers for the mangrove fern, *Acrostichum aureum* (Pteridaceae)

Abstract

Premise of the study:

Twenty-seven nuclear microsatellite markers were developed for the mangrove fern,*Acrostichum aureum* (Pteridaceae), to investigate the genetic structure and demographic history of the only pantropical mangrove plant.

Methods and Results:

Fifty-six *A. aureum* individuals from three populations were sampled and genotyped to characterize the 27 loci. The number of alleles and expected heterozygosity ranged from one to 15 and 0.000 to 0.893, respectively. Across the 26 polymorphic loci, the Malaysian population showed much higher levels of polymorphism compared to the other two populations in Guam and Brazil. Cross-amplification tests in the other two species from the genus determined that seven and six loci were amplifiable in *A. danaeifolium* and *A. speciosum*, respectively.

Conclusions:

The 26 polymorphic microsatellite markers will be useful for future studies investigating the genetic structure and demographic history of of *A. aureum*, which has the widest distributional range of all mangrove plants.