

**COMPREHENSIVE ANALYSIS OF *ALU* ASSOCIATED
DIVERSITY ON THE HUMAN SEX CHROMOSOMES**

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A comprehensive analysis of the human sex chromosomes was undertaken to assess *Alu*-associated human genomic diversity and identify novel *Alu* insertion polymorphisms for the study of human evolution. 345 recently integrated *Alu* elements from eight different *Alu* subfamilies were identified on the X and Y-chromosomes, 225 of which were selected and analyzed by the polymerase chain reaction (PCR). From a total of 225 elements analyzed, 16 were found to be polymorphic on the X chromosome and 6 on the Y chromosome. In line with previous research using other classes of genetic markers, our results indicate reduced *Alu*-associated insertion polymorphism on the human sex chromosomes, presumably reflective of the reduced recombination rates and lower effective population sizes on the sex chromosomes. The *Alu* insertion polymorphisms identified in this study should prove useful for the study of human population genetics.