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ACTION

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(54) Title: VERIFICATION OF FISH ORIGIN BASED ON NUCLEIC ACID PATTERN RECOGNITION

(57) Abstract: This invention is directed to isolated nucleic acid molecules that encompass a single nucleotide polymorphism (SNP) associated with fish. The present invention further is directed to isolated nucleic acid molecules that encompass a microsatellite sequence associated with fish. The invention further is directed to a method of determining the parentage origin of a fish sample (or a sample from any biological species with similar organization of reproduction as fish) by providing a parentage genotype database that contains a collection of candidate parent genotypes that each represent a distinct parentage origin and comparing a sample genotype to the parentage genotype database, such that a match between a sample genotype and one of the candidate parent genotype identifies the parentage origin of the sample.