

# DEVELOPMENT OF HAT-RAPD MARKER FOR DETECTION OF *STELLANTCHASMUS FALCATUS* INFECTION

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**Abstract.** The trematode, *Stellantchasmus falcatus*, is one of the members in the Family Heterophyidae, which is reported to be an endemic fluke in northern region of Thailand. A sensitive and specific detection of this parasite is required to determine the epidemiology at larval stages. Specific primers to determine the presence of *S. falcatus* were investigated using high annealing temperature random amplified polymorphic DNA (HAT-RAPD) PCR, with 10 arbitrary primers to generate different polymorphic DNA profiles. Eleven parasite species were used for comparison. A 380 bp HAT-RAPD *S. falcatus*-specific marker was found, and was cloned and sequenced, allowing a pair of primers (St-F 5'-GGCCAACG CAATCGTCATCC-3' and St-R 5'-GCGTCGGGTTTCAGACATGG- 3') to be designed to produce a 320 bp amplicon specific for *S. falcatus*. It revealed no cross-reaction with any of the other tested parasite species. The *S. falcatus*-specific primers can be used for epidemiological monitoring and for detection in snail intermediate hosts, which serve as usefulness tools in management and epidemiological control programs.

**Keywords:** *Stellantchasmus falcatus*, HAT-RAPD, detection, trematode

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