

TOXICOLOGY AND APPLIED PHARMACOLOGY

July 20-22, 2017 | Chicago, USA

Single nucleotide variation analysis in conservation of Tasar populations using EST-SSR markers

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The tasar silkworm, *Antheraea mylitta* Drury, lepidopteran insect, producing tasar silk of commercial importance is distributed in various parts of India as ecoraces, with variations in phenotypic traits. The assessment of genetic structure of each population is considered as prerequisite for understanding and preserving natural biodiversity. To determine genetic relationships among strains of tasar silkworm, *Antheraea mylitta* D, seven ecoraces of different geographical origin were studied and molecular characterization was performed using EST-SSR markers. Seven primer pairs flanking microsatellite sequences in the silkworm genome were assayed; out of which 60 regions have shown polymorphism at nucleotide level, which revealed that the silkworm ecoraces are genetically divergent from each other. In the present investigation, the SNP discovery obtained from sequencing of genomic PCR products has identified potential EST-SSR marker to recognize different tasar ecoraces. A comparative study of transitions and transversions of tasar ecoraces indicated inter-relations amongst tasar ecoraces.

Biography

G Shamitha is currently an Assistant Professor in the Department of Zoology, Kakatiya University, India. She has a long academic mileage and research experience in studies related to Tasar silkworm, *Antheraea mylitta*; its domestication, morphological, biochemical, molecular, phylogenetic, genetic variability and breeding aspects.

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