

**GENETIC DIVERSITY ANALYSIS OF THE FLEA BEETLE, *PODAGRICA FUSCICORNIS*
(CHRYSOMELIDAE) USING MITOCHONDRIAL CYTOCHROME OXIDASE
SUBUNIT I GENE MARKER**

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ABSTRACT

Podagrica fuscicornis referred to as Flea beetles are members of Family Chrysomelidae (leaf beetles) and occur in all plant life habitats. *Podagrica* species arise most frequently inside the open, namely within the location of grasslands, forests and water bodies. Molecular characterization and DNA barcoding is a taxonomic method that makes use of a short genetic marker in an insect DNA to identify a species, which include an unknown species. DNA barcoding for species identification of the Flea beetles, *P. fuscicornis* isolated from Malappuram district (Kerala: India) by using the mitochondrial cytochrome oxidase subunit I (CO I) gene have been checked. DNA sequence similarity searches of COI gene of *P. fuscicornis* (NCBI GenBank Accession No. KX 778629) revealed that it is genetically 87% identical to *Podagrica fuscipes* (Accession No. KF 655901) cytochrome oxidase I gene collected from Spain. The results indicate slow evolution of the CO I sequences among the morphologically distinct and geographically isolated group of *P. fuscicornis*.

KEYWORDS: Cytochrome oxidase I gene sequence, Molecular phylogeny, *Podagrica fuscicornis*