

**A STUDY ON THE MITOCHONDRIAL COI DNA SEQUENCE AND PHYLOGENETIC
STATUS OF *ANASTATUS BANGALORENSIS* MANI & KURIAN AND *ANASTATUS
ACHERONTIAE* NARAYANAN, SUBBA RAO & RAMACHANDRA RAO
(HYMENOPTERA: EUPELMIDAE)**

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ABSTRACT

Anastatus (Hymenoptera: Eupelmidae) species are end parasitoids of a wide variety of insect eggs of Hemiptera, Lepidoptera and Orthoptera. It included the family Eupelmidae of Hymenoptera and they are an important egg parasitoid of several major insect pests. Here we report the partial sequence of cytochrome oxidase sub unit I gene (COI) of *Anastatus bangalorensis* (KU052674) and *Anastatus acherontiae* (KU052673) and its phylogenetic relationship. The COI gene sequence of *A. bangalorensis* and *A. acherontiae* are showed considerable variation with other related species. The mitochondrial COI DNA barcode developed in this study can be used for the accurate identification. The COI partial coding sequence of *A. bangalorensis* (KU052674) are showed 1.6% difference to *A. acherontiae* (KU052673), *A. bangalorensis* and *A. acherontiae* demonstrates the efficiency of the barcoding gene in discriminating global phylogeographical variants among the related species complex. *A. bangalorensis* and *A. acherontiae* are in a same clade on the phylogenetic tree.

KEYWORDS: *A. Acherontiae*, *A. Bangalorensis*, Cytochrome Oxidase, DNA Bar-Coding, Molecular Phylogeny