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## PHYLOGENY OF PRIMATES BASED ON MUSCULAR CHARACTERS

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In this presentation we report the results of the first comprehensive cladistic study based on muscular characters that addresses the relationships among the major groups of living primates and taxa such as tree-shrews and colugos ('flying lemurs'). This analysis is based on information obtained from a review of the literature and from dissections of more than 50 specimens of various primate and non-primate taxa. The genera included in the analysis were: *Rattus*, *Tupaia*, *Cynocephalus*, *Lemur*, *Propithecus*, *Loris*, *Tarsius*, *Callithrix*, *Pithecia*, *Aotus*, *Saimiri*, *Macaca*, *Papio*, *Cercopithecus*, *Colobus*, *Hylobates*, *Pongo*, *Gorilla*, *Pan* and *Homo*. The cladistic analysis was based on 200 characters concerning the head, neck, pectoral and upper limb muscles of these taxa, using Nona & Winclada 2002. It resulted in a single, most-parsimonious, tree (L=324; CI=61; RI=68). The relationships among the primate taxa in this tree largely conform to those supported by recent molecular studies, i.e., colugos are the sister-taxon of primates, the Primates, strepsirhines, lemuriforms, New World monkeys, Old World monkeys, the subfamily Cercopithecinae, hominoids, and great apes are monophyletic groups, and there is strong support for the following relationships among the African apes: [*Gorilla*, [*Pan*, *Homo*]]. We will examine the phylogenetic and evolutionary implications of these results, and discuss the use of molecular, osteological and myological characters in phylogenetic reconstructions.

Keywords: anatomy, myology, phylogeny, primates