

MIDDLE MIOCENE FOSSIL APES FROM ABOCADOR DE CAN MATA: IMPLICATIONS FOR THE ORIGIN AND EARLY RADIATION OF THE GREAT APES AND HUMANS CLADE (PRIMATES: HOMINDAE).

S. Moyà-Solà¹, D.M. Alba², S. Almécija²

¹ICREA at Institut Català de Paleontologia and Unitat d'Antropologia Biològica (Dept. BABVE) UAB, ²Institut Català de Paleontologia, UAB, Edifici ICP, Campus UAB s/n, 08193. Cerdanyola del Vallès, Barcelona, Spain.

Presenter's Email: salvador.moya@icp.cat

Deciphering the time and place where the great-ape-and-human clade (Hominidae) emerged and *experienced* its initial adaptive radiation remains a contentious issue in paleoprimateology. Among stem hominoids, the kenyapithecine afropithecids have been proposed as the sister taxon of hominids on the basis of the scarce available evidence. The recent description of *Anoiapithecus brevirostris* from the Middle Miocene (ca. 11.9 Ma) of Abocador de Can Mata C3-Aj (Catalonia, Spain) permits to further test this hypothesis. Thus, besides some autapomorphic features (such as a strongly reduced facial prognathism) and several hominid synapomorphies (high face and zygomatic root, wide nasal aperture widest at the base, etc.), *Anoiapithecus* further shares several derived features with afropithecids (e.g., thick enamel) and, more specifically, with kenyapithecins; these include an extreme reduction of the maxillary sinus (also displayed by *Pierolapithecus*), a very deep canine fossa, and a reduced mandibular length with anteriorly placed rami. The presence of kenyapithecins (*Kenyapithecus* and *Griphopithecus*) in Eurasia during the Middle Miocene (ca. 14-15 Ma), together with the retention of kenyapithecine features in the somewhat later stem hominids from Spain, supports a sister-group relationship between the Kenyapithecini and the Hominidae. This is consistent with previous biogeographic scenarios suggesting a Eurasian origin of the Hominidae, and a later back-to-Africa dispersal of hominines during the Late Miocene. However, given the pervasive nature of homoplasy in hominoid evolution, the possibility cannot be completely ruled out that hominines and pongines independently evolved, in Africa and Eurasia respectively, from different kenyapithecine ancestors.

Keywords: Phylogeny, Paleobiogeography, Hominoidea, Kenyapithecinae