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New sauropod remains from the Villar del Arzobispo Formation (Upper Jurassic-Lower Cretaceous transition) of Galve (Teruel, Spain)

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In the Eastern Iberian Range (Spain) the Villar del Arzobispo Formation, Tithonian-Berriasian in age, represents transitional environments between the shallow marine facies of the end of Jurassic and the continental facies of the Lower Cretaceous. In this formation it has been found an assemblage of big sauropod, theropod, and stegosaur dinosaurs. One of these dinosaurs is the sauropod from the outcrop of Cuesta Lonsal in the Galve sub-basin, which is partially excavated. In this communication we present the study of an almost complete middle dorsal vertebra and a posterior dorsal neural spine of the Cuesta Lonsal sauropod. The dorsal vertebral record shows these autapomophies: Elongation Index much less than 1 (around 0,5); insertion of centropostzygapophyseal and centroprezygapophyseal laminae situated in the anterior and posterior centrodiapophyseal laminae and not in the vertebral centrum; parapophysis situated in the centroprezygapophyseal lamina and not in the anterior centrodiapophyseal lamina as in the rest of sauropods; and finally the presence of diverse accessory laminae (below the intraprezygapophyseal laminae, below the postzygapophyseal laminae and between the spinoprezygapophyseal and the spinodiapophyseal laminae). In addiction, it shows a singular combination of characters that are present on several sauropods of different clades. The most relevant are: marked lateromedial expansion of centrum and neural arch; big pneumatic cavity that occupies almost all the centrum; anteroposterior expansion of neural spine greater than the lateromedial one; absence of pre- and postspinal laminae and presence of pendant, triangular lateral processes in the distal end of the spine. This combination of characters and the autapomorphies indicate that the Cuesta Lonsal sauropod belongs to a new unnamed taxon, and different to *Losillasaurus giganteus*, which is defined in a stratigraphic level that could belong to the Villar del Arzobispo Formation.

The cladistic analysis shows that the Cuesta Lonsal sauropod is a neosauropod not belonging to the Macronaria or to the Diplodocidae+Dicraeosauridae clades. This analysis also shows a polytomy within the Neosauropoda clade, with the Cuesta Lonsal sauropod, *Haplocantosaurus*, *Jobaria* and the "rebbachisaurids" as the sister group to (Diplodocidae+Dicraeosauridae)+Macronaria. The complete study of the Cuesta Lonsal sauropod will provide new data to the neosauropod origin.

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